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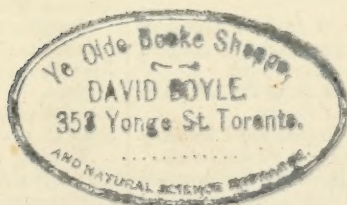


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THE  
**AMERICAN JOURNAL**  
OF THE  
**MEDICAL SCIENCES.**

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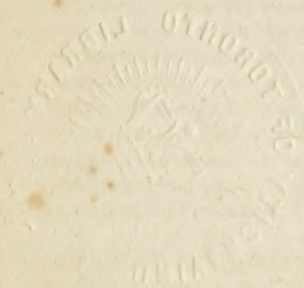
VOL. IV.

PHILADELPHIA:

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## TO READERS AND CORRESPONDENTS.

As by recent arrangements, we have acquired many new readers, who may be perhaps unacquainted with the peculiar plan and objects of this Journal, it is proper to say a few words on the subject. The *American Journal of the Medical Sciences* was commenced in November, 1827. The design of those concerned in its publication was to establish a NATIONAL WORK, devoted exclusively to the improvement of medical science, and to elevate the character and dignity of the profession, to the entire rejection of all LOCAL and INDIVIDUAL interests and PARTY views. To effect these objects, a large number of the distinguished medical men in every part of the union associated, and most of them have already contributed to the work. In the selection of original papers, the editors have had reference to *practical interest*, and have inserted only such as they believed would convey useful information at home, and be creditable to the country abroad. The communications already published, are from almost every section of the union, and as the editors never regard themselves as arbiters of medical opinion, exhibit great diversity of views.

In the department of Reviews and Bibliographical Notices, the editors endeavour to make their readers acquainted at the earliest period possible with all works, both foreign and domestic, which contain useful information—passing by those of little or no interest, except where the authority of a name gives sanction to what appear dangerous doctrines: in all cases, free criticism is admitted, when conducted with candour, and in that temperate and courteous tone which alone comports with the dignity of science. The articles in this department are likewise by various writers.

The Periscope is devoted to the annunciation of improvements in medicine; for which purpose most of the medical journals of Europe and this country are procured, and the editors have also access to the valuable libraries of the different scientific institutions of this city. Every new publication is carefully examined—all the useful information briefly noticed—and many of the most valuable papers given in a condensed form—thus presenting a complete summary of the progress of medical science. The articles are arranged according to their subjects under distinct heads. This plan is preferable to that of analyzing each Journal separately, as it affords to the inquirer direct reference to the immediate object of his research—saves much time and labour—and space is not occupied with worthless matter, often to the exclusion of what is useful, as must occur where there is no liberty of selection. Great attention is devoted to this department, and it is believed that it will be found to embrace, in addition to the interesting matter contained in the periodical publications, a mass of facts from new works to which access could not otherwise readily be obtained.

Anonymous communications are never admitted. The editors are, consequently, allowed a greater freedom of selection, without compromising their own opinions, and criticism is more surely restricted within proper bounds.

The responsibility for articles not signed rests with the immediate editor, Dr. Hays.

Having originated under the influence of physicians belonging to the different states, and most of the medical schools of the union; exclusively devoted to the honour and advancement of professional reputation and usefulness; unshackled by sectional, party, or personal feelings, it is not surprising that the *American Journal of the Medical Sciences* should have received a support from AMERICAN physicians, perhaps unexampled in the history of similar enterprises. The principles which have induced this result, the same catholic and elevated views of duty which have hitherto actuated its conductors, will continue to determine their course and control their proceedings. An undeviating regard to the great interests of the profession, and an unabated ardour in the cause of truth and science, will exclude all personalities, so universally the offspring of irritated egotism, as well as prevent the Journal from condescending to notice the attacks of such as conceive themselves aggrieved by a plan which denies admission to articles unsuited to advance the great cause of medical science, or unworthy the organ of a liberal and dignified profession.

The medical public are deeply interested in the success of this work, and they are invited to furnish to it their contributions.

Communications have been received from Dr. DANIELL, of Savannah; Dr. PENDLETON, of New York; Dr. PEIRCE, of Sutton, Massachusetts; and Dr. WELLS, of Maracaybo.

Also the following works:—

Description of the Distinct, Confluent, and Inoculated Small-Pox, Varioloid Disease, Chicken-Pox, and Cow-Pox. Illustrated by thirteen Plates. By John D. Fisher, M. D. (from the author.)

A system of Dental Surgery. In three parts. I. Dental Surgery as a science. II. Operative Dental Surgery. III. Pharmacy connected with Dental Surgery. By Samuel Sheldon Fitch, M. D. Surgeon Dentist, (from the author.)

A Biographical Memoir of Wright Post, M. D. late Professor of Anatomy and Physiology, and President of the College of Physicians and Surgeons in the City of New York. Delivered as an Introductory Lecture, on the 4th of November, 1828. By Valentine Mott, M. D. Professor of Surgery in Rutgers College, New York, (from the author.)

Transactions of the Medical Society of the State of New York, for the year 1829. With the Annual Address. By T. Romeyn Beck, M. D. President of the Society, (from the Society.)

An Oration delivered before the Central Medical Society of Georgia, at its annual meeting in Milledgeville, on 2d December, 1828. By Alexander Jones, M. D. (from the author.)

*Journal des Progrès des Sciences et Institutions Médicales en Europe en Amérique, &c.* Vol. XII.

*Annales de la Médecine Physiologique*, November and December, 1828, and January, 1829.

*Révue Médicale, &c.* October and December, 1828.



*Journal Général de Médecine*, &c. September, October, and November, 1828, and January, 1829.

*Archives Générales de Médecine*, November and December, 1828, and January, 1829.

*Bulletin des Sciences Médicales*, November, 1828.

*Journal Universel des Sciences Médicales* for December, 1828, and January, 1829.

*Journal Hebdomadaire de Médecine*. Par MM. ANDRAL, BLANDIN, BOUILLAUD, A. CAZENAVE, DALMAS, LITTRE, REYNAUD, H. ROYER-COLLARD, Vol. I. Nos. 1, 2, 3, and 4.

*Litterarische Annalen der gesammten Heilkunde*. Herausgegeben von Dr. J. F. C. HECKER, February, March, October, and November, 1828, (in exchange.)

*Rust's Magazin für die gesammte Heilkunde*, 1827, (in exchange.)

*Gemeinsame deutsche Zeitschrift für Geburtskunde*, (in exchange.)

*Notizen ans den Gebiete der Natur und Heilkunde*, gesammelt und mitgetheilt. Von LUDWIG FR. VON FRORIEP, 1828, (in exchange.)

*The Medico-Chirurgical Review*, for January, 1829, (in exchange.)

*The London Medical and Surgical Journal*, for December, 1828, and January and February, 1829, (in exchange.)

*The London Medical and Physical Journal*, for December, 1828, and January and February, 1829, (in exchange.)

*London Medical Gazette*, December, 1828, (in exchange.)

*Boston Medical and Surgical Journal*, Vol. I. Nos. 49 to 52, inclusive, and Vol. II. Nos. 1 to 9, inclusive, (in exchange.)

*The North American Medical and Surgical Journal*, April, 1829, (in exchange.)

*The Transylvania Journal of Medicine and the Associate Sciences*, February, 1829, No. 1, (in exchange.)

*Transylvania Journal of Medicine and the Associate Sciences*. Extra. I. Mr. W. P. Nicholson's Pamphlet, and II. Dr. B. W. Dudley's Reply, (from the editors.)

*The Western Journal of the Medical and Physical Sciences*, for November, 1828, and January and February, 1829, (in exchange.)

*The New York Medical and Physical Journal*, Vol. I. No. 4, (in exchange.)

For the gratification of our contributors we continue the references to the works, in which they will find notices of their communications; these references are, of course, restricted to the Journals received during the preceding three months.

Professor Mott will find his Case of Ligature of the Common Iliac Artery copied into Froriep's *Notizen*, for April, 1828.

Professor DICKSON's paper on Dengue is reviewed in the *Western Medical and Physical Journal*, for November, 1828.

Dr. Spence's Case of Pulmonary Consumption is copied into the *Journal Universel*, for October, 1828.

Dr. WRIGHT's paper on the Reunion of Fractured Bones is copied into the *London Medical and Physical Journal*, and reviewed in the *London Medical and Surgical Journal*.

Dr. MITCHELL's Cases of Dysentery are copied into the *London Medical and Physical Journal*, for December, 1828.

Dr. KAIN's paper on Intemperance is noticed in the *Medico-Chirurgical Review*, January, 1829.

Dr. DE LEON's Case of Schirro-Contracted Rectum is noticed in the *Medico-Chirurgical Review*, for January, 1829.

Dr. ARNOLD's Case of Paruria Erratica is noticed in *Froriep's Notizen*, for July, 1828.

Dr. PENNOCK will find his Experiments on the use of Cupping-Glasses in Poisoned Wounds, reviewed and translated in the *Journal des Progrès*, Vol. XII.

Dr. HEISKELL's Case of Extra-Uterine Fœtation is copied into the *Archives Générales*, for December, 1828.

Dr. POWELL's Case of Excision of the Spleen is copied into *Froriep's Notizen*, for July, 1828.

Dr. GRIFFITH's Case of Salvation is noticed in the *Archives Générales*, for December, 1828.

Authors of new medical books, desirous of having them reviewed or noticed in this Journal at the earliest opportunity, are invited to transmit to the Editors a copy as soon after publication as convenient, when they will receive prompt attention. Under ordinary circumstances, very considerable delay is caused by the circuitous routes through which they are received.

Papers intended for publication, should be sent, *free of expense*, as early after the appearance of the Journal as possible, in order to be in time for the ensuing number. Such communications should be addressed to "CAREY, LEA & CAREY, Philadelphia, for the Editors of the American Journal of the Medical Sciences." All letters on the *business* of the Journal to be addressed exclusively to the publishers.

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- XIV. A Practical Treatise on Parturition, comprising the Attendant Circumstances and Diseases of the Pregnant and Puerperal States. By Samuel Ashwell, Member of the Royal College of Surgeons, and the Medico-Chirurgical Society of London. To which are appended two Papers, the one containing some Remarks on Abdominal Surgery, the other on Transfusion; presented by Dr. Blundell, of Guy's Hospital. London 1828, pp. 546, 8vo. with 13 plates - - - - - 145

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- XV. On Aneurism, and its Cure by a New Operation. Dedicated by permission to the King. By James Wardrop, Surgeon to his Majesty. London, 1828, pp. 117, 8vo. - - - - - 166
- XVI. Mémoires de l'Académie Royale de Médecine. Tome Premier. Avec six Planches. Paris, J. B. Bailliere, 1828, 4to. pp. 496 - - - 169
- XVII. A Treatise on the Nature and Cure of Intestinal Worms of the Human Body; Arranged according to the Classification of Rudolph and Bremser, and containing the most approved methods of treatment, as practised in this country, [England,] and on the continent [of Europe.] By William Rhind, Surgeon, Member of the Royal Medical Society of Edinburgh. Illustrated by six plates. London, 1829, pp. 142 - - - 176
- XVIII. De l'Irritation et de la Folie, ouvrage dans lequel les rapports du Physique et du Moral sont établis sur les bases de la Médecine Physiologique. Par F. J. V. Broussais. Paris, 1828, pp. 590, 8vo. - - - 180
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- A Supplement to Myology, containing the Arteries, Veins, Nerves, and Lymphatics of the Human Body, the Abdominal and Thoracic Viscera, the Ear and Eye, the Brain, and the Gravid Uterus, with the Fœtal Circulation. By Edward William Tuson, Lecturer on Anatomy and Physiology, Member of the Royal College of Surgeons in London, &c. &c. London, 1828, folio, pp. 9. Plates. - - - - - 192
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ART. I. *Experiments on the use of Metallic Ligatures, as applied to Arteries.* By HENRY S. LEVERT, M. D. of Alabama.

DR. JONES, in the course of his interesting experiments "on the process employed by nature in suppressing the hæmorrhage from divided and punctured arteries, and on the use of the ligature," arrived at a very striking result; one that seemed likely to lead to an important innovation in the application of the ligature. He found that if a ligature be drawn around an artery with a degree of force sufficient to divide its internal and middle coats, the subsequent inflammation and effusion of coagulable lymph produced its obliteration, and the ligature might be removed, and the wound healed by the first intention.

Had these conclusions been found by subsequent inquirers to be correct, we might have considered it a degree of perfection in the use of the ligature, beyond which we can never hope to proceed; but unfortunately, others who have investigated this subject, have arrived at conclusions somewhat different, and have found that although an evident contraction of the calibre of the vessel, was the almost invariable result of an application of the ligature as recommended by Dr. Jones; yet its complete obliteration was seldom observed.

Mr. B. TRAVERS imagined that the cause of failure in these cases proceeded from a too speedy removal of the ligature, before the sides of the vessel had time to contract the slightest adhesions, and improving upon the idea of Dr. Jones, has advised that it be suffered to remain on the vessel for a short time, until adhesions should be

established between the opposing sides; by which means he hoped to secure invariably the desired result.

To ascertain the truth of this reasoning, he instituted a number of experiments upon inferior animals, and actually realized the results which he had anticipated. Since the publication of his paper, the practice he recommended has been extended to the human subject, and in some cases has been attended with the happiest effects; in others, however, it has failed entirely, and has even been productive of the very worst consequences. The length of time necessary for the ligature to remain on the vessel, the inconveniences which result from a wound kept open forty-eight or seventy-two hours, and the doubtful effects of the ligature unless suffered to remain on for that period, are obstacles which must always prevent this practice from being adopted. It therefore remains for future inquirers to discover some means by which that direful malady, aneurism, can be alleviated, without those unpleasant consequences which invariably attend the present mode of operating, if indeed such a result be attainable.

Some years ago Dr. PHYSICK suggested the propriety of an animal ligature, thinking that it would be removed by the absorbents; the external wound might therefore be closed, and all the bad effects produced by the ordinary ligatures thus obviated. We cannot say positively what has been the result of this practice, but believe that the animal ligature is not used so much as its importance demands.

The same gentleman has likewise suggested the use of leaden ligatures, with the view of obtaining such results as were hoped for from his animal ligature, or the temporary one of Dr. Jones. To this he was led by a knowledge of the fact, that bullets, buck-shot, and lead would remain in contact with almost any tissue of the body, without producing irritation or unpleasant consequences, and that for an indefinite period. So far as I know, a trial of this ligature has never been made; with a view, therefore, to ascertain its effects, I have instituted a number of experiments, the results of which I will now relate.

*Experiment I.*—On the 16th of May, 1828, I laid bare the right carotid artery of a dog, and, after separating it carefully from its accompanying nerve and vein, I passed under it a lead wire, and tied it firmly. Both ends of the wire were then cut off with a pair of scissors, and the sharp points bent down with a common dissecting forceps. The wound was now drawn together with a few stitches of



the interrupted suture, and over these were laid some adhesive strips. This animal was not confined, but suffered to run at large: when I examined him several days after, I found the stitches ulcerated out, and the wound open; it had filled up from the bottom with granulations, but the edges of the skin were separated to a considerable distance: with light dressings, it healed entirely by the 5th of June.

*June 28th.*—I killed this animal and dissected with care the neck. A small cicatrix existed in the skin; the lead was found in the situation in which I had placed it, by the side of the vein and nerve, perfectly encysted; the artery at this place had been removed entirely, for the space of half an inch.

Both ends of the vessel, caused by this removal of its central portion, adhered by loose cellular substance to the surrounding parts, which appeared to be in a perfectly natural state. The end towards the heart was not at all increased or diminished in size; it was sealed up for three-eighths of an inch in extent, by an organized substance, resembling a coagulum of blood in colour, but not in consistence, it being much firmer. The end towards the head resembled the one just described, in all particulars: the substance, however, which filled its extremity was of greater extent, and occupied the whole space up to the next branch, which was rather more than half an inch.

Not the slightest trace of inflammation existed in the neighbouring parts, on the contrary, they appeared perfectly natural. The lead itself was enclosed in a dense cellular substance, which formed for it a complete cyst.

*Experiment II.*—The right carotid artery of another dog was separated from its contiguous parts, on the 17th of May, and a lead wire placed around it, as in Experiment I. The lips of the wound were kept in contact with sutures and adhesive strips. I examined it three days after, and found that it had united by the first intention, in the whole of its course, except in those points included by the stitches; these I cut loose, and dressed it simply with adhesive strips. When I looked at this dog again, I found that from the itching of the wound, the animal had scratched off the dressings, and broken up the new adhesions; I washed it carefully to remove the dirt, and dressed it with simple dressings. It healed kindly, and was entirely well on the 6th of June, at which time I killed the dog, and made a careful dissection of the parts. The cellular substance here was much thickened and indurated, forming a strong bond of union between the nerve, vein, and artery. The two former were in their natural condition; the artery was pervious its whole extent, to within three-

eighths of an inch of the wire: at this place the calibre was entirely obliterated; a firm substance, resembling bruised muscle, filled its cavity; between the ligature and the head, the artery was impervious, and much diminished in size, having the appearance of a mere cord, not exceeding one-fourth the original dimensions of the vessel. The lead preserved its situation around the artery; it had become entirely encysted, and not the slightest remains of inflammation existed.

*Experiment III.*—I cut down on the left carotid of a third dog, on the 29th of May, and proceeded as in Experiments I. and II. differing in no respect, except in dressing the wound: I used no stitches, but merely adhesive plasters.

*June 1st.*—I examined the wound, and found that it had united through its whole extent, but as I supposed the union not to be very firm, the strips were reapplied, and suffered to remain on until the 5th, when they were removed altogether.

*June 27th.*—The animal was killed and a minute examination made. The lead wire was found around the vessel, which was impervious for an inch or more, as in the former experiments. The surrounding parts healthy.

*Experiment IV. June 9th.*—The dog which was the subject of the last experiment, having entirely recovered from the first operation, now became the subject of a second, which was performed on the carotid of the opposite side. This was conducted exactly as the preceding; the wound united by the first intention without the least difficulty; no constitutional symptoms manifested themselves. On the 27th, at which time this dog was killed, an examination was likewise made of this side of the neck; the appearances corresponded exactly with those of the preceding experiments.

*Experiment V. August 5th.*—I performed a similar experiment on the carotid of another dog. I killed him on the 3d of September, and found that the appearances differed in no respect from the foregoing.

The lead having answered my expectations so well in these cases, I felt a great inclination to ascertain, whether that substance alone possessed the property of remaining in contact with the living tissues, without exciting irritation or any unpleasant consequences, or whether similar results might not be obtained by using the other metals. I accordingly continued the subject, using gold, silver, and platinum, instead of lead.

*Experiment VI. August 12th.*—The right carotid of a dog was separated neatly from its surrounding parts, and tied firmly with a small gold wire; the wound was kept closed with adhesive strips, and by the third day had united firmly. *Sept. 2d.* The dog was killed,

and I examined his neck; I could perceive no difference in the appearances exhibited here, from those produced by the lead.

*Experiment VII. October 13th.*—I exposed the left femoral artery of a dog, and placed around it a gold wire. *15th.* I examined this dog, and found that from his restlessness he had removed the dressings and had torn open the wound; I replaced them, and he recovered in a short time. *Oct. 30th.* I examined the subject of this experiment, and found that the results corresponded in every particular with those above related.

*Experiment VIII. October 16th.*—The above experiment was repeated on this dog; the wound healed very kindly by the first intention, &c. *Oct. 30th.* I found the result to coincide with the last in all particulars; there was a slight appearance of ecchymosis around this ligature, which, no doubt, would have been removed in a few days more, only fourteen days having elapsed between the operation and the examination of the result.

*Experiment IX. October 5th.*—I passed around the carotid of a dog, a piece of silver wire, and united the wound by the first intention, which had taken place on the 9th, at which time I examined it. *Oct. 30th.* I found that the silver had become encysted, and had left no remains of irritation.

*Experiment X. October 5th.*—The same experiment on another dog. *30th.* The results the same.

*Experiment XI. October 13th.*—I passed a silver wire around the right femoral artery of a dog. *15th.* Wound healed. *30th.* Wire encysted. No traces of inflammation remaining.

*Experiment XII. August 29th.*—I cut down on the left carotid of a dog, and passed around it a platinum wire. This animal made his escape, and I did not see him again until the 16th of October, when I examined his neck; the wound had united so nicely that its former situation could scarcely be recognise; the cellular substance beneath was slightly thickened and indurated; the artery was obliterated for an inch and a half or two inches; the middle portion resembled a small cord, around the centre of which, I found the platinum wire enclosed in a mass of condensed cellular substance, which formed for it a cyst; the inside of this cyst was smooth, and adhered closely to the platinum; no traces of inflammation remained.

*Experiment XIII. October 15th.*—Another dog was subjected to an experiment resembling the above in all particulars. *Oct. 30th.* I killed him and found no other difference in the appearances, than that the cyst which enclosed the platinum, was not so perfectly formed; it however existed.



*Experiment XIV. October 16th.*—This experiment was conducted precisely as the two last; the appearances upon examination were the same. This dog was the subject of Experiment VII. and was examined on the 30th of October.

*Experiment XV. June 15th.*—I enclosed the humeral artery of a dog in a ligature made of a single stran of silk, previously waxed. In applying the ligature, I drew it barely tight enough to place the opposite sides of the vessel in contact, without dividing the internal and middle coats. Both ends were then cut off, and the lips of the wound placed in apposition; it did not unite, however, by the first intention, the dressings having been removed by the animal; it was now dressed in the usual way, and soon healed perfectly by granulations. On the fourteenth day after the operation, I made a dissection of the parts: the artery was filled with a firm coagulum, both above and below the place of the ligature, which prevented the possibility of hæmorrhage, so firmly did these coagula adhere to the parietes of the vessel.

The ligature was found in the centre of a small *abscess*, loose and detached from the surrounding parts; the artery was ulcerated through, the ends being separated a short distance.

*Experiment XVI. August 15th.*—I repeated this experiment on the femoral artery of another dog; the wound was united by the first intention. *Sept. 2d.*—Upon dissection, an *abscess* as large as a pea, was discovered immediately under the skin and above the artery; the loop of silk was found in its centre, and offered no resistance when I attempted to remove it.

*Experiment XVII.*—I passed under the femoral artery of a dog a piece of gum elastic, previously stretched and rolled to render it of a proper size, and tied it with a single knot. This operation was performed on the 15th of August; the wound united by the first intention. *Sept. 3d.*—An examination was made of the result of this experiment. The ligature was found encysted; the inner side of the cyst was uneven, and not in close contact with the gum elastic; from its appearance, I thought that pus had existed, but was now absorbed; the artery was obliterated to the next branch, both above and below.

*Experiment XVIII. August 20th.*—The same experiment repeated on the right carotid of another dog. *23d.*—Perfectly united by the first intention. *September 2d.*—The gum elastic was found contained in an abscess as large as half a nutmeg; the artery was impervious both above and below the ligature, and ulcerated through at the place of its application.

*Experiment XIX. September 1st.*—The experiment with gum elas-



tic was repeated on the femoral artery of another dog, and the wound united in the usual manner. This dog was the subject of Experiment XII.; consequently I had not an opportunity of examining him until the 16th of October, when he was again caught. The cicatrix in the skin was to be seen plainly. On making an incision at this place, I perceived a small lump, about the size of a pea, immediately under the skin, and at the lower angle of the wound. I opened this and found it to contain the gum elastic ligature, surrounded by a small quantity of yellowish-looking pus; the vessel was removed for the space of an inch and a half, both ends obliterated. Just above the place of the ligature, several small arteries, not distinguishable in the healthy condition of these parts, were observable, and appeared to be spent upon the contiguous muscles.

*Experiment XX. August 25th.*—I cut down on the left femoral artery of a dog, and tied it firmly with a grass ligature, such as is used for fishing-lines. *27th.*—It had healed by the first intention. *September 2d.*—The grass was found encysted, but the inner side of the cyst was moist and uneven, and did not appear to embrace the ligature closely; no appearance of inflammation.

*Experiment XXI. August 25th.*—The same operation performed on another dog. *September 3d.*—It was examined and found to correspond with the twentieth in every particular.

From the experiments now detailed, we may, I think, conclude, that the plan of tying arteries with lead and the other metals, is free from danger, and may be productive of some peculiar advantages; more experience, and a greater number of experiments are necessary to establish this point thoroughly, and it is to be hoped that some one fully competent to the task, will prosecute the subject.

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ART. II. *Reports of Cases of Erysipelas, treated at the Baltimore Alms-house Infirmary, showing the countervailing influence of that disease over other affections existing in the system at the time of its invasion, with Observations.* By THOMAS H. WRIGHT, M. D. Physician to the Institution.

FROM some cause, not satisfactorily definable, Erysipelas, in various forms, has for fifteen months prevailed among the patients of the Baltimore Alms-house. During this period, the disease has never been wholly absent, but the cases have been commonly single, and never

more than two or three in number at the same time; usually about the close of the disease in any one case, a new instance of it, in the forming state, has been presented in some other patient. There has, however, been no very significant reason to suppose that the disease was propagated by contagion. The cases which succeeded each other have occurred generally in patients who had no vicinity to, or intercourse with each other; the individuals attacked in succession being commonly confined to bed remotely from one another, often in different and distant wards. There has been but one instance of two patients having stations near each other being successively affected.

The disease in question has been apparently as independent of any appreciable general causes of production as of special propagation, it having existed in the house for a period embracing all the revolutions of season, and remaining unmodified.

There has been a marked uniformity of symptoms in a great majority of the cases of the disorder, the general character of which, together with some of its curious and not uninteresting results, it is the design of this paper to report. With rare exceptions, the disease presented constantly a blended form of the œdematose and vesicular species. Of a large number of cases, a few only exhibited the phlegmonoid character, terminating in suppuration. With similar infrequency of exception, the disease occupied the same seat. It commenced in almost every instance on the forehead, spread rapidly over the scalp and face, and defined its bounds in front at the meeting of the submaxillary integument with that of the neck; sometimes extending behind also, as low as the sub-occipital margin. Only a few cases of the vesicular form invaded any other seat than the face and scalp, and of these one or two appeared on the trunk and limbs, the breast, arm, or leg. Thus there were a few cases of the phlegmonoid species, and one or two of the simply œdematose form, (with one case of the gangrenous or sphaceloid character,) occupying various seats, as the arm and forearm, the thigh and leg. All the rest of the cases were eminently vesicular.

It is not the design of this report to bring into discussion the general pathology or treatment of erysipelas, though there are few forms of disease of more serious character than erysipelas of the face and head, associated as it commonly is, with very decided constitutional impression. The pathological and curative indications of erysipelas have been themes fruitful of opposite opinions and practice; and it is yet much controverted whether the various forms of that affec-

tion shall be classed among diseases of high or of low excitement, and of course, whether the treatment shall be conducted on the antiphlogistic or cordial plan. Much of the discrepancy of opinion in this respect seems to have arisen from a partial view of the subject, or the consideration of the disease under the very different aspect it presents, in different stages of its progress. The constitutional disturbance attending erysipelas is peculiarly prone to sudden and great mutation. Like other febrile states of the irritative class, but in a greater degree than almost any other, the phenomena of erysipelas, both local and general, exhibit a very different aspect, and actually represent a very different state of the system, in a brief interval of time. The tumult of the vascular function which attends the forming stage of erysipelas, often mounts as the local expression of the disease is thrown out, to a very explicit entonic grade of excitement, as is unequivocally manifested by both the local and constitutional signs. But that excitement, after an uncertain duration, generally a short one, commonly runs rapidly toward the point of collapse and exhaustion. The disease then, viewed under its different aspect in distinct stages of its course, must wear a character correspondent to its time of duration and sum of effects. Hence, perhaps, the main cause of adversary hypothesis as to the essential character and appropriate treatment of erysipelas. And while this consideration may serve to reconcile seemingly conflicting opinions on the nature and attributes of the disease, it inculcates the necessity for vigilant discrimination in adapting the treatment, both local and constitutional, to the altered circumstances of the system and the part.\*

The following cases are reported with the design of pointing out the very manifest controlling or modifying influence displayed by erysipelas, over other forms of disease existing in the system at the time of its invasion.

CASE I.—Hannah Kennard, forty-five years of age, full habit and firm constitution, was admitted into the Baltimore Alms-house, June 7th, 1827, for treatment of a large inveterate ulcer of the

\* The above general remarks on the character and tendency of erysipelas, refer chiefly to erysipelas of the face and head, with explicit constitutional disturbance; a form of disease generally and justly considered of very serious import. It may be noticed here, what is sufficiently obvious, that the character and tendency of every form of erysipelas will be modified and determined by the causes which give occasion to its occurrence, and by the constitutional or casual state of the system at the time of its development.



leg, of four years standing. Her general health was unbroken. On the third day after admission, this woman complained in the evening of being sick, feeling alternately chilly and feverous, with head-ache and nausea. Ordered an emetic, to be followed by a full dose of calomel.

The following morning, the second of the disease, there was soreness, with swelling, heat, and inflammatory blush, over the integument of the forehead, face, and part of the scalp, the swelling greatest on the forehead. The pulse was frequent and full, febrile heat generally diffused over the body, tongue white, head painful. The woman attributed her indisposition, (incorrectly I think,) to having been washed in cold water, when first admitted into the house. This was the first instance of erysipelas of the face and scalp occurring in the house, after the medical department of the institution had been placed in my charge. She was ordered small doses of calomel, nitre, and antimonial powder, at intervals of four hours, with an intervening dose of weak solution of tartar emetic, charged with spirit of nitre; drink, barley water acidulated; diet, milk diluted, and toasted bread; free admission of air. The local affection was treated with solution of muriate of ammonia in distilled vinegar and water; the solution charged with a small quantity of tincture of camphor, and applied cool, by means of linen cloths.

On the third morning the face and scalp were swelled to great deformity; the palpebræ loaded and closed, the cheeks almost level with the spine of the nose, lips very thick and hard, the whole surface, forehead and face, smooth and glistening from tension. The pulse more frequent than on the day before, still full but less firm; the general heat increased, tongue brown, with white edges, and moist; head painful, mind somewhat unsteady. The medicine was continued, with addition of camphor to the powders of calomel and nitre; and, on account of slow bowels, sulphate of magnesia was added to the draught. The local application was also continued, but under an impression that it would be more soothing, and better relieve heat and tension, it was directed to be used pleasantly warm. *Afternoon*, large and very much elevated vesications over the face, and which were directed to be carefully punctured, the effused fluid gently washed off with tepid water, and the warm ammonia lotion reapplied; on account of vigilance and restlessness, a full anodyne of Dover's powder was ordered for the night, after operation on the bowels.

*Fourth morning*, the patient was a good deal prostrate, pulse con-



tracted and quick, surface rather cool, tongue dry, and brownish-red, bowels lax, the face and scalp less swoln, surface of vesications dry and red; the patient was quieter than before, and rather disposed to somnolency, approaching stupor. The treatment was now changed. Quinine was ordered, one grain in two hours, dissolved in acidulated aromatic water, with tincture of bark, *spt. mindereri* every four hours, with ten drops of laudanum, to restrain the bowels; local application continued as an occasional wash for the erysipelatous surface, which was after dusted with common starch. Diet rendered somewhat cordial, by a small addition of wine to the bread tea, which had been previously used in a simple state.

*Fifth day*, the energies of the system had rallied sensibly, irritation of the bowels allayed, pulse less frequent, and more steady, the surface naturally warm, and the patient acknowledged improvement of feelings. The amendment continued. On the sixth day fever was absent, the patient sat up in bed, and took nourishment with sufficient appetite. Her complete recovery was established in a few days; the whole erysipelatous surface desquamated.

The ulcer of the leg, five or six inches every way in surface, which had remained in a foul, unhealthy condition for four years, in a few days after the fever of erysipelas subsided, filled up rapidly with granulations of good size and colour, and, under simple treatment, with rest, closed in with a firm, smooth surface, in little more than a fortnight after recovery from her late illness.

CASE II.—William Ivy, aged twenty-six, robust constitution, was admitted into the Baltimore Alms-house October 12th, 1827, labouring under very severe inflammatory rheumatism of nearly a fortnight's duration. Active inflammation, with great swelling, occupied the carpal articulation of both wrists, and extended over the fascia of both arms and hands; the tension of the inflamed parts was unusually great, the local sensibility and distress extreme; there existed high feverous tumult, much heat, thirst, &c. The case seemed one of simple rheumatic feverous irritation, confined mainly to the vascular system; none of the important organs of either the great cavities appeared to suffer any particular degree of embarrassment.

The treatment in this case was conducted on the plain indication of restraining excitement, and quieting irritation from pain. Venesection, moderate purging, diaphoretics of the sedative, non-stimulating class, and anodynes at intervals, constituted the general means. The chief local application was first the cold lotion of muriate of ammonia with tincture of camphor, afterwards the same as a warm

embrocation, the former temperature seeming constantly to increase, and the latter to allay somewhat the pain and sense of tension.

This patient was bled as often and freely as seemed at all necessary or prudent, was kept with uniformly soluble bowels, took nitrate of potash with antimonial powder, or ipecacuanha, or tartar emetic, (occasionally the colchicum,) in as full doses as the stomach would bear, sometimes the same medicines in combination with opium, or hyosciamus, used the warm bath at suitable intervals, was at last fully salivated by calomel in small doses, employed in combination with other agents as a diaphoretic; yet for twenty-one days the pain and distress scarcely relaxed, even partially; neither did the fever in all that time intermit, nor sensibly abate.\*

About this stage of the case, Ivy was seized, without any evident cause, with a very distinct rigour, or chill. His body became cold; skin dry and pale; pulse small, weak, and frequent. This state lasted more than an hour, when, by cordial drink and warm applications, reaction was established. As this took place fever returned, but the character of excitement was a good deal changed. The pulse was now less full, the heat of surface not so great, the head more painful and confused, with more of general torpor, and the whole system, in short, was more prostrate than before.

During the following night the patient was, for the first time since he came under treatment, unsteady in mind, muttering, or speaking unconsciously; and when aroused, complained much of his head. The next morning, the face and scalp were observed to be swelled, the former exhibiting an inflammatory blush, with a shining or polished appearance, and some degree of effusion in the cellular tissue around the eyes. This was the man's state at my visit about ten o'clock, and it was now plain that erysipelas had supervened.

It immediately occurred to me as probable, and such impression was mentioned to my assistants, that the intruding disease might extinguish the rheumatic action, both local and general, which we had hitherto found so intractable and persisting. At the same time it was manifest that danger, perhaps greater than before, now existed.

\* Free perspiration, generally considered so desirable and salutary in fever of acute rheumatism, was early produced in Ivy's case, and the skin continued uniformly in full action during nearly the whole course of treatment; yet, so retentive of excitement had the vascular system become, that neither the frequency nor volume of the pulse, nor the evolution of febrile heat, were perceptibly restrained or abated, by universal diaphoresis fully maintained for a long period.

In thirty-six hours from the onset of this form of disorder, the whole scalp was swelled and very tender; the face was expanded and tense to great distortion; the eyes closed and encumbered by excessive infiltration of the lids, the lips thick and rigid, from a similar cause; vesications, at the same time, overspread the middle region of the face. The general circumstances of the patient were frequent, small, irritable pulse; red tongue with clammy surface, and rather dry; surface of the body temperate, without sensible moisture; head affected by dull pain; belly somewhat full and tender; aversion to food; position supine; manner torpid and listless.

The treatment of the case was simple. The medicinal agents were chiefly the subcarbonate of ammonia, (in the form of *spt. mindereri*), to which wine of ipecacuanha was added, and occasionally five drops of laudanum, to restrain a tendency to diarrhœa, which occurred with the inceptive symptoms of erysipelas. With this course was directed immersion of the extremities in warm salted water, at intervals, and warm spirituous fomentations every few hours to the abdomen. The patient's drink was cool barley water, with sugar and acid; his diet, milk diluted, with toasted bread macerated in the sauce. The local inflammation was treated by fomentation, with solution of *mur. ammoniæ*, containing *tinct. of camphor*.

This patient was convalescent on the sixth day from the chill, and it may be said, that not a vestige of rheumatic irritation, either local or general, was apparent after erysipelas made its incursion. The inflammation, swelling, and pain of the carpal articulations, which had remained undiminished up to the time of the occurrence in question, subsided remarkably, even during the course of the superadded disease, and no reference was made by the patient to pain of those parts, after commencement of inflammation, swelling, &c. from erysipelas, about the head and face. The character of fever, as proper to acute rheumatism, was at the same time extinguished, and did not in any degree recur. In fact, after the general disorder concomitant of erysipelas passed away, which it did very rapidly, Ivy remained wholly free of fever, and gradually recovered his full stock of health. The carpal articulations continued very weak for some time after his general health was restored.

CASE III.—William Pine, aged about thirty, had been for many months in one of the cells of the Baltimore Alms-house, in a state of insanity. From what could be learned of his history prior to admission, he had been for some years in an unsettled state of mind, and had occasionally undergone medical treatment and moral restraint on that account. His understanding, at the time of his admission,



seemed wholly obliterated, and he continued without after-evidence or interval of reason, during the time stated; namely, for many months. His manner was generally silent and sullen, and when he could be excited to any degree of effort, he spoke with rapid incoherence, his conversation running into a chaos of folly. The man's bodily health seemed little affected by his state of mind; he became somewhat emaciated from confinement, but his pulse was always calm and equal, and the temperature of body natural. He took food regularly, though without that voracity of appetite frequently attending insanity, and the excretions necessary to health were sufficiently performed. In respect to the latter, however, the patient had reverted to the state of childhood; the evacuations were passed without regard to time or circumstances.

The preceding statement is given to show the man's common state while in the house. On the 9th of June, Pine was attacked by chill, with high fever, flushed countenance, inflamed eyes, foul tongue, and the general evidences of great disorder. He was immediately removed from his cell to the infirmary, for the benefit of a purer and fresher atmosphere. On the day succeeding the chill, a deep florid hue overspread the face and scalp, swelling went on rapidly, attended by the smooth, glistening appearance characteristic of erysipelas, with effusion into the cellular structure of the eyelids, lips, &c. as described in the former cases. The feverous tumult was much more marked, than in the preceding instances, with severe head-ache, great heat of body, &c.

Already, in the first stage of this acute attack, Pine's intellect seemed to be rousing from its long torpor and habitual error. When questions were addressed to him now, there was an apparent act of deliberation before answering, and his replies, with occasional vacillation, were coherent and satisfactory. This relative saneness became more distinct and established as the disease advanced, and on the third, fourth, and following days of its course, Pine's manner, replies, &c. were orderly and rational; no longer betraying any tendency to alienation. The local inflammation, and constitutional disorder were very severe in this case, for some days. The former resulted in early and extensive vesication, terminating ultimately in general desquamation of the cuticle of the face. The fever remitted on the fourth day, and subsided altogether about the sixth, (its nearly uniform period of cessation in almost all the cases,) leaving the patient much debilitated.

The treatment was conducted by moderate purging with calomel, followed by Epsom salts, with minute addition of tartrite of anti-



mony. The subcarbonate of potash, with wine of antimony or ipecacuanha, was afterwards given generally through the course of fever, in doses and at intervals regulated by its effect on the stomach, pulse, and skin. The patient's drink, diet, and general regimen was the same as in the cases before reported, and the local application used in the other cases, was employed in this also.\*

The intelligence which had been revived in Pine's case, with the development of erysipelas, continued during his convalescence, and he left the institution without having betrayed indications of lapsing into former obliquity of mind. This man abused the privilege granted to convalescents, of walking in the yard for air and exercise, and eloped from the alms-house, ten days after recovery from erysipelas. His state since then is not known to me.

CASE IV.—Kitty Day, aged twenty-eight, had entered the Baltimore Alms-house, in April, 1827, with blended symptoms of rheumatism, and secondary syphilis. Periostitis was developed in various seats, more particularly on the frontal and parietal bones. After a long course of alterative treatment, chiefly by purgatives and the compound decoction of sarsaparilla, with regulated diet, her general health was very much amended, the points of periosteal disease faded away for a time, and she engaged in some of the labour of the house. An impression made by cold, from her taking part in scouring the hospitals, renewed the inflammation with great intensity, in its original seat on the right parietal bone. The local affection ran on to suppuration, with extensive detachment of the scalp, and, ultimately, necrosis of the external table of the skull ensued. The surface of dead and denuded bone was from one to two inches in diameter, and was penetrated in many points from loss of substance, presenting a cellular or honey-comb series of cavities, admitting the probe down to the medullary portion of the cranium. The integument also exhibiting a similar series of openings, from which a foul discharge was constantly exuding. The patient was much distressed by remittent hemicrania.

While under treatment for this renewed and aggravated state of

\* I regretted afterwards not having used the lancet guardedly in Pine's case. I think it would have been well borne, and beneficial, and it would have been satisfactory to test cautiously the effects of venesection in such cases. Pine's was the only instance in a number of cases, where the excitement seemed to justify experiment by direct depletion, and in his case it was omitted, partly because all the others had done well without it, but more from the consideration, that the inroad of erysipelas had found his system a good deal subdued by a long course of solitary confinement.

her original symptoms, Day became suddenly ill, and as her illness was ushered in by chill and fever, acute pain of the head, and swelling over the scalp, particularly around the portion of diseased bone, with low delirium and early stupor, the pupils of the house concluded that the new train of symptoms arose from inflammatory irritation in the investing membrane of the brain, lighted up in connexion with the renewed local disease of the skull and scalp. This was the report of Day's case, at my visit on the morning following her acute attack. On examining the patient, I thought the symptoms referrible to the stage of erysipelas. The tumefaction, considerable all over the head, had extended to the face, which was florid, tense, and glistering. Those characters of the local affection, particularly the extent of surface involved, led me to decide that its nature was erysipelatous, rather than a state symptomatic of meningitis, derived from disease of the cranium and scalp. The state of stupor to so great a degree, though not a very common attendant on erysipelas of the head and face, and not associated with that disease in any former case occurring in the house, might very possibly be connected with such affection, suddenly developed in that seat with unusual intensity.

The explicit signs of erysipelas were soon manifested, and they assumed a severity not observed before. It traversed the whole superficies of the face, passing below the facial line of the inferior jaw, and terminating abruptly in front at the line of meeting between the skin of the face and that of the neck. Under the jaw the inflammation was propagated to the cellular tissue, producing swelling, thickening, and pain, and very much impeding swallowing. The inflammation on the face, in the present instance, passed its common limits, in other respects, also overspreading the ears, rendering them tumid to a great degree, and penetrated down the meatus externus, probably to the tympanum, as the sense of hearing was abolished for some time. The mucous membrane of the palpebræ, and the conjunctival tunic of the eyes, were also invaded; intense inflammation occupied the latter seat, terminating in ulceration of the cornea of the left eye.

This case ultimately ended well. After many days of febrile disorder of the low, irritative kind, with delirium, attended by excessive tumefaction of the scalp and face, blindness, deafness, and great discharge from the ears, the constitutional disturbance and local affection gradually subsided, and the patient slowly regained her health, hearing, and vision, except a slight opacity of the cornea of the left eye.

The remarkable effect of erysipelatous development in this case is

the fact, that on the recession of inflammation, swelling, &c. of the scalp, it was found, that all the ulceration and the fistulous openings in the scalp over the extensive surface of caries of the parietal bone, were completely shut up and consolidated, the integument apparently adhering firmly to the bone over the seat of caries, and dipping down into the cavities caused by waste of substance in portions of the outer table of the skull; three or four indentations capable of receiving the point of the finger, now exist in the former seats of fistulous ulceration. There is no appearance of inflammation about the points in question, nor is the scalp more sensitive there than in other regions over the head.

CASE V.—Kitty Newman, aged thirty-six, entered the Baltimore Alms-house, June, 1828, on account of *porrigo favosa* of the scalp, attended with large pustules, which overspread nearly the whole face, but in patches of three or four together, with margins touching each other, and somewhat blended. These pustules were a good deal elevated on a dark red indurated base, with summits encrusted by dry scabs, occasionally desquamating, and again renewed. The porriginous disease of the scalp, and the pustular affection of the face, were probably the same in nature, but an apparent distinction seemed to be established by the fact, that the latter was wholly without that constantly distilling ichor so characteristic of the severer forms of *porrigo*, whether seated on the head, trunk, or limbs. Both those states of eruption had existed four years prior to the woman's admission into the Alms-house; the pustular disease of the face preceding the scald head many months. The patient reported herself to have undergone repeated salivation, and other alterative treatment—local and general—without benefit.

This woman became the subject of *erysipelas* a few weeks after entering the Alms-house Infirmary. The disease put on the same aspect, occupying the same seat, as in the preceding case. The intensity of constitutional impression, however, was less; there being in this case neither stupor nor delirium. The swelling of the face and head, sense of tension, burning heat, &c. were very great, proceeding to early and extensive vesiculation; and, as in Day's case, the ears were exceedingly tumid and painful, and hearing for a time extinct. The inflammation involved here also, the integument and cellular substance under the lower jaw, causing much enlargement at that point, and impeding speech and swallowing. The eyes escaped inflammation, though shut up by tumefaction of the lids.

The fever was comparatively mild, and did not tend to that low irritative character which had accompanied most of the former in-



stances of the disease. Moderate purging by mild neutral laxatives, cool acidulated drink, light farinaceous food, and fresh air, with rest, were sufficient to conduct the case to a safe result. The local treatment was the same as in other cases, with a constant covering of starch powder toward recession of the inflammation, and during separation of the cuticle. The sub-maxillary integument and cellular tissue remained swelled and indurated for a fortnight after disappearance of erysipelas from the face, and finally the indolent enlargement suppurated opposite the mastoid process of the left side, and was discharged by incision.

It was pleasing to contrast the appearance of this woman's face, after the erysipelas had passed off, with the character it had exhibited previous to the incursion of that disorder. Not a vestige of the hideous crop of scabrous pustules, with which the face was before deformed, now remained. The surface was perfectly smooth, and only a shade of rather more colour than the natural hue of skin, pointed out the former seat of foul eruption. The porriginous disease of the scalp was almost as much corrected, something of the furfuraceous condition of the skin of the head exists, but infinitely less offensive than its former filthy state.

CASE VI.—Elizabeth Fowler, aged sixty-four. This was a chronic case, (long in the Alms-house,) of general disability, complicated with *Paralysis agitans*. The case was very strongly marked by total loss of control over the whole set of muscles of voluntary motion, and the substitution of an involuntary, incessant, tremulous, and vacillating action of those muscles. This was so much the case that the unfortunate subject of the disorder could not suppress the agitation of the head and limbs for a moment, nor convey food or drink to her lips.

Elizabeth Fowler suffered an attack of erysipelas about the termination of the preceding case. No instance of the disorder occurring in the house exhibited a more full expression of the local inflammatory symptoms, than was displayed in the case of this infirm old woman. Besides its ordinary extent of swelling, pain, &c. over the whole face and scalp, the inflammation assumed a more acute and penetrating character, in some respects, in the present, than in any former instance. As in the case of Day and Newman, the parts below the jaw became very much swoln and indurated, but the pain of that part, and the difficulty of swallowing, were far greater in Fowler's case than in either of the others; insomuch, that for many days scarcely drops of fluid could be forced into the stomach. The tonsils were so enlarged as to touch each other, and all the



parts around the top of the œsophagus—the funnel of the pharynx—exhibited a deep inflammatory colour, as did also the tongue, the floor of the mouth, and the fauces generally. The state of the throat and mouth, in short, was the same as in severe quinsy, and would have been attributed to a casual complication of cynanche with erysipelas, had there not appeared a marked connexion and dependance of the inflammation of the fauces, with, and upon, the external development of erysipelas. The commencement, course, and close of the symptoms, showed their intimate relation, and a similar state of the throat and fauces, in a minor degree, attended other cases of erysipelas occurring in the house.

The constitutional symptoms were urgent in the degree to be inferred from the nature of the disease, and the character of the local affection. Fever of irritation was exquisitely marked; small, rapid pulse; pungent heat of surface, universal and unabating; great thirst; dark red tongue, soon becoming dry and fissured. Among the disorders of the gastric œconomy, were loathing of food, and retchings to vomit, with tenderness of the epigastrium and abdomen, and tympanitic fullness of the latter region; bowels costive. From the onset of the disease the sensorial functions were much disturbed, with vigilance, anxiety, restlessness, and vehement complaint; symptoms passing on to frequent fits of fugitive delirium.

The medicinal treatment in this case was unusually limited and simple, owing in part to resistance, sometimes voluntary, sometimes unconscious, of the patient, against the use of medicine, and in part to her great difficulty of swallowing even small quantities of liquid. Some purgative effect was occasionally accomplished by medicine, but chiefly by injections; otherwise the treatment rested mainly on cool acidulated drink, as much as could be taken, fresh air, and ablution (with sub-tepid water) of the extremities, frequently repeated; fomentation of the abdomen was also employed, on account of fulness and tenderness of that region. This was the course of management during the more acute stage of the disease, for the first four or five days. Afterwards, when fever fell to a subacute type, and the difficulty of swallowing became less, the patient took somewhat regularly a neutral febrifuge preparation, chiefly the *spt. mindereri* with *spt. nitre*, and on farther decline of the excitement, with a tendency to prostration, the quinine was exhibited freely, and cordial nourishment allowed in as full amount as could be taken. The treatment of the local affection was the same as in all the preceding cases; namely, by the camphorated ammonia lotion, warm, with an acidulous wash for the fauces and throat.

The patient, very contrary to my apprehension at its commencement, struggled through her formidable disease. Her convalescence was slow, but all constitutional disorder at last passed off, and repair of strength gradually took place. Even yet, however, five weeks posterior to the termination of the general disease, tumour, thickening, tenderness, and tendency to chronic suppuration, remain under the lower jaw.

One effect of the erysipelatous incursion in this case, was curious and interesting. Almost as soon as the inflammation of erysipelas began to overspread the face, the agitation of her head and limbs was much abated, and on the second day of her illness, scarcely a slight tremor was obvious in any part of the body. When the patient was raised up in bed and supported, the head was now nearly still, and she could take a vessel containing drink in her hand, and carry it to her mouth with almost perfect steadiness. This state of comparative freedom from former involuntary movements, continued through the more acute period of the disorder. As the constitutional impression made by the erysipelas began to wear off, (about the ninth day,) there was a manifest tendency in the muscular system, toward its former habit of disordered action. The tremulous vibration of the head and hands became again apparent, chiefly on the patient's making exertion to talk or move; but the agitation of the head and limbs was not nearly so great as formerly, and has not sensibly increased during the patient's advancing convalescence. At the expiration of six or seven weeks after erysipelas and its train of symptoms have passed off, the patient is herself sensible, and all about her remark, that she is much less shaken and disabled, than before her late illness.

I have thus reported, as succinctly as I could, a few cases, tending to show what I have termed "the countervailing" or modifying influence of erysipelas, over other modes of disease with which it may happen to come in conflict. Many other cases occurring in the alms-house, have served to illustrate its effects in a similar way, often in a very obvious degree. But the subject is not, perhaps, of sufficient interest to demand multiplication of such reports, the facts they are calculated to establish being probably more curious than important. Only one case of erysipelas, among those occurring in the house within the period mentioned, fifteen months, has proved fatal. This was the case of a black woman, who had suffered a severe attack, affecting the face and scalp, and recovered. Shortly after the disease was renewed in consequence of exposure at night to cool, damp air, from an open window. This relapse was attended by peculiar symptoms; a chill occurred in the night; next morning, the right half of

the face and scalp were greatly swelled, tense and glistening, and the patient comatose. The right eye was singularly affected. It was so much protruded as to seem nearly out of the socket, and was itself so enlarged and tumid, as to appear likely to burst. The soft parts behind the globe were equally gorged by infiltration, as the lids were pressed forward with great tension and volume, and the conjunctiva affected with chemosis. As soon as I saw this patient, the conjunctiva was deeply and freely scarified, and, as well to take off inflammatory irritation from tension, as to preserve the eye from apparent imminent hazard of giving way by rapid ulceration, the cornea was opened by incision near its sclerotic margin. The parts about the eye were thus sensibly relieved from extreme distention, and at the same time such general measures were directed as were deemed appropriate, chiefly blisters and cordial medicine, as the system was cold and torpid, and the vital functions seemed tending to sudden and fatal collapse. But the patient sunk continually, and died the night ensuing the attack, the whole course of the disease occupying little more than twenty-four hours. On dissection, abundant sero-sanious infiltration was discovered in the medullary substance of the right anterior lobe of the cerebrum, as well as upon the pia mater in front of the right lobe, and about the neurilema of the right optic trunk. The subject of this case had been long in the Alms-house Infirmary, on account of amaurosis, and presented also an instance of schirro-hydroptic ovarian tumour, of great size.

I have thought it not out of place, to subjoin to the forgoing report of cases a few remarks; first, on a part of the subject already touched on in the introduction to the report; and secondly, on some points of difference among eminent authorities, as to the legitimate character, definition, &c. of erysipelas, and its varieties.

Throughout the course of this disease among the patients of the Alms-house, great difficulty has frequently occurred to my mind, in arriving at any satisfactory idea of its manner of origin and propagation. For a considerable time previous to the commencement of its late prevalence, there had been no instance of this disorder in the house, and the first case that fell under notice, occurred out of the house, and was brought into the institution. The circumstances, however, wholly exclude the idea of propagation from this case. The man who was the subject of it, was placed in the surgical ward among thirty or forty other patients, not one of whom exhibited a case of erysipelas, for months after the man in question was discharged, and the case which followed this was Hannah Kennard, first



case reported, in the infirmary for female blacks, attic story of the building. The succeeding instance occurred in the infirmary for white males, in the east wing of the house, and the next appeared, not in the same hospital, but in a patient long confined in the surgical wards, the two patients having never seen each other. One of the most severe cases displayed itself in William Pine, long in solitary confinement in one of the cells, for mania, who was visited by none others than his medical attendants and keeper.

It is unnecessary to pursue this question farther, as it is not designed to controvert the position, that some forms of erysipelas, (those only perhaps which possess, or seem to possess, the character of idiopathic affections,) may be communicable under circumstances favouring such mode of propagation. The only countenance given to the opinion of probable contagion, during the late course of erysipelas through the Baltimore Alms-house, was furnished by the succession from the case of Kitty Day. Kitty Newman lay within one bed of Day, and Newman was attacked by erysipelas when Day was getting well. Elizabeth Fowler again, occupied a bed opposite to, and within a few feet of Kitty Newman, and Fowler suffered a severe attack before the close of Newman's case. Here the propagation, with vicinity of persons ceased. The next case that occurred in the same hospital, was in a woman named Long, who was out of the hospital, (as a convalescent,) great part of every day, yet slept there at night, but then used a bed in a part of the ward remote from either of the before-named women. The disease has not occurred in any of the male or female nurses.

When I looked for the occasion of the prevalent disorder among the more common causes of disease, as cold for instance, either suppressing perspiration, or acting on certain predisposition in individual instances, circumstances would by no means generally warrant a reference to it alone, as exciting the disease. In one or two cases, and only in those, the persons affected by erysipelas had been exposed just before the attack to a current of cool, damp, night air; in far the greater number, however, the disease occurred in patients in more sheltered situations than others who escaped. An examination of other possible causes of predisposition or excitement to the disease, furnished no satisfactory elucidation of its frequent occurrence in the institution. The food of the alms-house is always abundant, sound, and good, and is frequently changed; the diet of the hospitals especially, (among the tenants of which the disease almost uniformly occurred,) is wholly at the discretion of the medical attendants. In relation to any question on the possible agency of a



hospital atmosphere in the evolution of the disease, all such presumption seems fairly set aside by the excellent police of the house. Personal and general cleanliness, free and uniform ventilation, with immunity from all sensible nuisance, are so characteristic of the institution in all its departments, the hospitals not less than others, as to have been long and deservedly the admiration of all visitors.\*

Erysipelas, as well as some other forms of disease not possessing the attributes proper to epidemics generally, is yet supposed by respectable writers, to have been occasionally produced and diffused with something of the epidemic character under certain atmospheric constitutions. The discussion of such a question is indifferent and unsuitable here; epidemics of all sorts have their period of prevalence determined by season and circumstances; and the fact of the disease under consideration having ran its course with equal pace, under all the changes incident to a continuous interval of fifteen months, is sufficient to establish its relative independence of season, temperature, and their combinations. In connexion with this view of the subject, I may remark that I took occasion to observe and inquire, and could not find one case of erysipelas, (not even of the sporadic or symptomatic form, every now and then to be met with,) in private practice of my own or others of the profession, for the whole time of its prevalence in the alms-house. Two cases have occurred, and ran their course out of the alms-house, yet having some relation to that establishment. One in a woman in the city, about ten days after she had been dismissed the alms-house in seeming good health. The other in the wife of the keeper of the public gate of the alms-house farm, who occasionally visited the alms-house, but had not for a long time entered the hospitals. If those two cases be supposed to give intimation of a miasm about the alms-house, such conclusion is at the same time discountenanced by a multitude of adversary considerations, a part of which are that hundreds have been discharged during the course of erysipelas in the institution, among whom, as far as known, the disease has not afterwards occurred, except in the single instance noted, and hundreds remained about the establishment for

\* Another fact seems to contradict the presumption of hospital miasm, as the agent of the disease under consideration. For two years prior to June, 1827, there was not, (as far as I can learn,) any equal or similar spread of the disease in the house, nor even in the memory of the pupils, a single well-marked case of erysipelas during that time. Since the date referred to, the disease in its most severe forms, was never absent from the house until the last of August, 1828, about which time it ran out altogether, and no new case has arisen in the house from that time to this date, (4th of December, 1828.)

the whole period referred to, without incurring any participation of the disease.

After all, there is much obscurity around the cause and mode of prevalence of a disease, having a sort of local habitation, attacking some, and passing by others under seemingly like circumstances; and affecting at one time, or even altogether, a very limited proportion of the whole number, who have been at once, or in turn, exposed to its influence.\* Perhaps the nearest approach that can be made to the true occasion of excitement to the disease, as it displayed itself in the alms-house, will be to infer the existence of something in the state of the constitution and habit of the individuals affected, inducing a peculiar susceptibility to erysipelatous incursion, or as it has sometimes been expressed, creating an erythematic or erysipelatous diathesis. On such constitutions and habits, both local and general causes may combine to produce an effect. Hospital air, confinement, and moral causes, involving many circumstances of depression to mind and body, or creating an irritable state of both, may thus bring on the disease, or augment the liability to such a result from the agency of general causes, as vicissitudes of weather, the impression of a high or a low temperature, and possibly, during the season of its existence, the operation of a miasmatic agent. In a few of the cases of erysipelas occurring in the alms-house, especially those of the erratic form, the disease seemed to be associated with prominent disorder of the gastro-hepatic functions, or superinduced and founded on the bilious diathesis. But such cases were rare, and in the general, no such concurrence or connexion appeared.

The difference of opinion among respectable authors, as to the true character, definition, &c. of erysipelas and its varieties, is a matter both of interest and importance. The classification and description of CULLEN, WILLAN, &c. beautiful and satisfactory, because faithful to nature; fully comprehensive of the varieties of the disease, and long the guide and standard of pathologists and practitioners; late opinions emanating from high sources, instruct us to consider as too general and strained. Passing by others who hold the same sentiment, the author of the "*Study of Medicine*," the classical, learned, and ingenuous GOOD, has pronounced that the definitions of erysipelas by CULLEN, WILLAN, BATEMAN, &c. are equivocal and arbitrary, and

\* Not more than from forty to fifty have been affected by erysipelas out of all who have been in the hospitals, or who have come into and gone from them, during fifteen months. Even of those who have been in the wards for the whole of that time, a few only have suffered an attack from this disease.

confound modes of inflammation, essentially different in nature and cause. The main objection urged by Dr. Good against this classification, applies to the recognition on the part of the latter writers of a distinct variety of the disease under the name of "erysipelas phlegmonodes." Good contends that a proper suppurative action "does not belong to any mode of erysipelalous inflammation," and that what has been mistaken for suppuration ensuing to that disease, is a "sanious fluid approaching the nature of pus," but that such fluid is never "true pus." He says farther with PEARSON, that a "true phlegmon is never met with in erysipelas."

Now the answer to all this appears to be that the authors of the disputed definition, plainly never meant to identify strictly the suppurative result of one mode of erysipelas, with "true phlegmon," as ordinarily produced. They designed to represent simply what the definition implies; that there was one form of erysipelalous inflammation having a tendency to, and often terminating in suppuration or abscess. That this position is sustained in fact, the observation of practical men will abundantly establish, and in the face of such support, all cavil about the "genuine phlegmon"\* of erysipelas, or of a "circumscribed cavity containing laudable pus, never occurring in erysipelas,"† seems wholly superfluous. Erysipelas often terminates in suppuration or abscess, no matter whether strictly circumscribed or more diffused, to great extent, and if the nature of the inflammation and the state of the system affect the quality of the matter formed, so that it does not present the entire aspect of pure pus, neither does this fact alter the result so as to abolish or impair the correctness of the definition. It is still suppurative erysipelas, and entitled to the term "phlegmonoid," because no other appellation could better represent the state and consequence designed to be shown.‡ Dr. Good is surely in error, when he identifies "the sanious fluid approaching the nature of pus *found in parts of the vesication*," with the purulent formations distinguished by Cullen, Willan, &c. in phlegmonoid erysipelas. The former is superficial, marking the change from the vesicular to the pustulous stage of the common erysipelalous exanthem. The latter is abscess in the sub-dermoid cellular tissue, often even more deeply seated, and involving the inter-mus-

\* Good.

† Pearson.

‡ The super-nicety of discrimination applied to this question, would equally exclude from the order of suppurations all abscesses dependant on constitutional causes, so that by the rule set up, strumous abscess, (psoas for example,) shall not be termed suppuration, nor the matter of ripened tubercles be denominated pus.



cular cellular laminations with the fasciæ and tendons proper to the muscles themselves, constituting a purulent collection, sometimes of a few ounces, and not infrequently amounting to many pounds.\*

I am sensible that apology is due for extending this paper to a length exceeding its merit, and I regret to trench so far upon the space of the journal. With this acknowledgment, I beg to report briefly two cases, bearing on the contested point of phlegmonoid and suppurative erysipelas.

Nachel Shipley, an alms-house patient, while convalescing from a fever of the typhoid character, was affected by inflammation, pain, and swelling of the left arm above and below the elbow. The faint colour, œdematous feel, and appearance of small phlyctenæ or vesicles, distinguished the affection, as of the erysipelatous kind. By a free use of a stimulant, evaporating lotion, with strict rest, the local inflammation was so nearly dissipated that particular attention to the patient was discontinued. A week afterwards this man again presented his arm for examination; it was now more swelled than before, and gave unequivocal signs of deep-seated abscess, both above the elbow and on the forearm. Free incisions were made at both points, and eight or ten ounces of thick, grayish-yellow matter, mixed with shreds of membrane, discharged. The parts among which the matter had been effused, coalesced readily; the incisions soon healed, and the patient was dismissed from hospital in a few days.

Lodwick Forman entered the Alms-house Infirmary, January, 1827, for chronic catarrh, with other marks of general, low health. This man had also herpes circinatus of the face of many years standing. In February, 1828, he was attacked by erysipelas of the face and scalp. A bright red efflorescence appeared on the forehead, and rapidly overspread the face and head, accompanied by swelling, heat, and a tormenting sense of irritation in the part; the surface affected very soon exhibiting generally minute aggregated vesications. On the second day a circumscribed tumour appeared on the right side of the head, over the fronto-temporal angle. The tumour was deeper coloured than the rest of the face or scalp, and more painful than any

\* In the introduction to his remarks on erysipelas, Dr. Good labours to establish the same distinction between erysipelas and phlegmon, as exists between phlegmon and small-pox. But if I do not mistake the application of the terms and analogies he employs, they will bear an interpretation that phlegmon and erythema may meet in a common result. I am not, however, desirous to convict the learned and excellent Good of inconsistency. There is obscurity about his illustration of the subject, and I may not have read him according to his design.



other part. It increased rapidly in volume, (still maintaining a definite circumscribed form,) until on the fourth day, the swelling was as large as an egg, and gave evidence of fluctuation. On the fifth day the apex of the tumour feeling thin, it was punctured freely, and discharged about an ounce of homogeneous, straw-coloured fluid, which I should denominate pus, though less thick than perfectly pure pus from acute phlegmon in a healthy habit. While this first tumour was maturing, another formed just behind it, above the ear. This was equally circumscribed as the former, rose to about the same magnitude, and after maturing, was opened, discharging contents similar in kind and colour to the matter of the first. During the progress of the second tumour, if phlegmon it must not be called, five more distinct individual swellings of a similar character displayed themselves on the same horizontal line of the head, and about an inch distant from each other, seated two on the occiput, two on the left parietal, and one on the left fronto-temporal junction, thus forming with the first two, a belt of tumours encircling the head. All those tumours suppurated, and were in turn emptied by puncture or incision, according to thinness or thickness of integument; all of them discharged a yellow, inodorous fluid, homogeneous, but rather less dense than the most pure pus. That those tumours were specimens of "true circumscribed abscess," was established by the fact that where two of the tumours came in contact in the course of their evolution, and both of them were mature in suppuration at the same time; if one was incised freely, and wholly emptied, the adjacent one remained full, and a probe passed through the incision in the one, could not by any moderate pressure be made to penetrate the cavity of the other. This experiment was tried in two instances, and in each case it was necessary to open both cavities with the lancet or knife. That this was a case of pure erysipelas, its origin, course, and termination, place beyond doubt. Vesications overspread the face and scalp, ending in copious desquamation of both; the whole cuticle peeled from the face, and was broken up and thrown off from the scalp, the latter taking the hair with it, and leaving the patient quite bald.\* This was a case of erysipelas, too, ending in abscess, so near to phlegmon, as to leave no small difficulty where to fix the discrimination. The erythematous efflorescence in this case extended over the ears, and into the meatus externus, producing a free dis-

\* He has since a full growth of new hair; the herpes of the face which had existed for years in this man's case has wholly disappeared since erysipelas occupied that seat.

charge from both external auditory passages, very much resembling that "sanious fluid approaching the nature of pus," which Dr. Good seems to regard as the only suppurative effort proper to any form of true erysipelas.\*

Dr. Good has also pronounced the classification of Willan incorrect, as it applies to some other forms of erysipelas, namely, to what the latter defines as *Erysipelas œdematodes*, and *E. gangrenosum*; neither of which, Dr. Good says, ought to class with the species *Erysipelas*, but belong of right to the genus *Erythema*. It is not proper to devote a paper like this to the business of adversary discussion, nor is such its design. Yet it may be remarked, that even Dr. Good admits, that in one of the two varieties into which he distributes *Erysipelas*, (*E. erratica*), "the part affected sometimes assumes a livid hue, and is covered with petechiæ; the cuticle separates, the cutis breaks, and exposes a foul ulcerated surface, which soon passes into gangrene." During the course of erysipelas in the Alms-house, one or two cases occurred, of both the œdematoid and gangrenous forms. Those cases I had proposed to report, but this paper has exceeded the limit intended at its commencement, and I forbear the detail of the cases in question. I am not the advocate of multifarious classification, nor anxious to retain or restore nosological exuberances, which able and ingenious pathologists are endeavouring to lop off; in order to clear the field of medical science; but we may be allowed some space for deliberation and inquiry, before exchanging for others, terms and definitions of morbid states, long familiar to the profession, and which have come down to us from a remote era, receiving in their course the confirmation of men eminent alike for the extent and accuracy of their observation. Dr. Good has laudably endeavoured to establish a natural arrangement of diseases, and to give them distinctness and precision of definition; and if he has attempted a great deal, he has also performed much. His works form a noble monument of learning and labour, exhibiting unsurpassed industry of research, with a rare tact of discrimination, allied to the most honourable candour and impartiality. The profession of medicine owes him a meed of respect, which its present or future members shall hardly sufficiently pay; yet it may admit a doubt, whether the classification and nomenclature of the "Study of Medicine," (beautifully

\* Mr. Pearson has remarked, and Dr. Good quotes the expression, "that purulent effusion, or a sort of suppuration, sometimes supervenes to erysipelas, in which the cellular membrane suffers great injury, and the part is commonly in a gangrenous state."

explicit as it certainly is in the general,) is not in parts, rather fanciful and constrained, than natural or just, and more fitted to confuse than to instruct. Such I conceive to be the case, in its application to some of the morbid states hitherto distinguished as erysipelatous. I cannot see the benefit or improvement to result, from divorcing, under separate heads, and by new terms, modes of local inflammation so often found associated, and so generally known by terms in familiar use. Erysipelas, as a local affection, is commonly symptomatic of some more general error of health, and arises from irritation of some kind, superadded to previous disorder of state and function, either in the part, or the constitution, or both. As a mode of inflammation, it is not susceptible of strict and invariable definition, because it is eminently liable to great and rapid change of sensible characters, dependent on the varying state of the part and the system. The inflammation of erysipelas may and does pass, in a brief interval, from its most simple form of superficial efflorescence, through all its intermediate states, down to its issue in gangrenous undefined ulceration. Inflammation, intrinsically the same in nature, will thus perhaps have assumed, in a short time, the successive, (ostensible,) characters of erythema, or *Erysipelas simplex*, *E. vesiculosum*, *phlegmonodes*, *œdematosum*, and *gangrenosum*; terms designed to discriminate not different kinds of inflammation, but the contingent circumstances or actual state of a mode of inflammation, susceptible of obvious changes, to which the added terms have a relative and correspondent application.'

A case lately occurred in the Baltimore Alms-house, affording a very interesting display of that mode of inflammation which Dr. Good defines as *Erythema œdematosum*.

A man was brought to the Alms-house early in December, extremely ill, with general paralysis, fugitive delirium, and fever of the congestive typhoid character, contracted by exposure to inclement weather, while working on the Baltimore and Ohio Rail-road. On admission, an unusual fullness was noticed at the top of the sternum, extending over both sterno-clavicular articulations. The integument over that seat was prominent, as if either swelled by infiltration, or pressed forward by uncommon adipose accumulation. The part was carefully examined, and suspicion was entertained that the enlargement was morbid, and belonged to those bad forms of local inflammation, occasionally concomitant of typhoid fever of exalted irritation, yet there was neither pain of the part on pressure, nor the colour, tension, or heat attendant on inflammation. The enlargement was looked to every day, and manifestly increased in volume and ex-



tent of surface, becoming broader and more prominent. On the third day after admission this part wore a faint red colour, which receded and returned as pressure was made or taken off; some heat too was perceptible, and the part now pitted slightly on pressure, giving signs of infiltration with softening or œdema. By the fifth day, the enlargement had extended half the length of the right clavicle and two inches above the clavicle on the neck, was a good deal rounded in front, and gave to firm pressure in opposite directions, evidence of deep-seated effusion. The character of the fluctuation was emphysematous, or rather crepitating as in comminuted fracture. The fluid was of moderate amount, and covered in by a very firm wall of integument and condensed cellular membrane, and on this account its discharge by incision was not performed at the moment, but in consideration of the propriety of an early evacuation of such collections, especially when forming around articulations, or adjacent to important cavities, it was decided not to postpone an incision longer than to the following morning. On the next day, the tumour, which had been the day before pretty much defined in outline, rounded, and somewhat firm, had undergone a remarkable detumescence, was undefined, flattened, and soft, affording scarcely a sign of fluid collection. At the same time a very obvious fullness, with some prominence, was apparent under the whole clavicular margin of the right pectoral muscle, and the body of that muscle was preternaturally prominent, and pressed forward, as low down on the chest as the line of the fifth rib. It was apparent that the fluid which had been somewhat concentrated the day before, was now diffused under the right pectoral muscle, and the end designed by incision was no longer attainable. The result which the operation mainly contemplated to avert, was already accomplished. A discovery was made on this day, (the sixth after admission of the patient,) which seemed to import that the condition of parts concerned in the abscess was worse than our greatest fears had anticipated. While feeling around the part affected, it was discovered that every touch of the right clavicle caused a grating like that of fracture, and on grasping the clavicle with the thumb and finger, and giving it pressure upward and downward, crepitation was perfectly distinct, and the movement of the clavicle itself so free, as to prove clearly the fact of its complete disjunction at the sternal extremity. On drawing down, pressing up, or rotating the arm, the clavicle gave the same grating on the sternum, and the same loose play of movement, as when itself directly pressed on; the sterno-clavicular articulation was totally broken up. This state of parts accounted for the (supposed) emphysematous character of the fluctuation on



the first day that fluid accumulation was detected, and the unfortunate result seemed to admit of but one interpretation; inflammation of the cellular tissue and skin around the sternal extremity of the clavicle, had run on to that form of ulcerous sloughing abscess, characteristic of phlegmonoid erysipelatous affection, the erythema of Good, "œdematose inflammation" of HUNTER; or according to EARLE, SCOTT, and others, "diffuse inflammation of the cellular membrane;" and the sterno-clavicular ligaments were destroyed in the sloughing ulcerous degeneration. When this explanation of the local mischief was offered, one of the pupils of the house suggested the probability of accidental fracture or dislocation, as a cause of the existing state of the parts. He had learned, that on the day the patient became sick, he had been in a frolic with many others, and had exerted himself very much in wrestling, had received some hard falls, and might thus have suffered violence to the part, followed by the consequences as described. A kind of injury, and a condition of parts very similar to what existed in the case before us, might possibly have arisen from the cause suggested, yet I adhered to the opinion first advanced, that this was a state of things wholly independent of local violence, and strictly symptomatic of the character of the fever. The patient's general symptoms were milder at this time than when he was admitted, yet I considered the local affection as betraying intense disorder of the constitution, and giving most unpropitious omen of the final result.

On my visit the day following, the nurse of the ward called my attention to the left arm of this patient. He had found the wrist of that arm the evening before sore to the touch, and showing signs of inflammation, and had applied a bread poultice to the part. On the next morning the wrist was swelled, high-coloured, and hot. The inflammation appeared first in a circumscribed red spot over the tubercle of the ulna, at its radial junction, and in the course of the night spread around the whole wrist. The parts were now much swelled, and pitted slightly on pressure; fluctuation could not be detected. On the third day, deep abscess formation was developed, and a thin pus, slightly sanious, discharged by free incision. After emptying the part by gentle pressure, the ulna rose over the radius, and was found totally free of attachment to that bone, its connexions being destroyed by ulceration, and allowing the carpal extremity of the ulna free motion; when moved it made very distinct crepitation on the radius, and the same character of rough friction was produced in the carpo-radial articulation, by giving movement to the hand.

At the time the abscess of the left wrist was opened, the patient requested me to examine his left knee, which was sore to pressure,

and very sensibly swelled; the tumefaction was chiefly about the implantation of the tendon of the rectus and vasti into the head of the patella, and there seemed to be considerable effusion under the tendon. This enlargement differed in appearance from the inflammation on the sternum, and around the wrist, the former showing no signs of suppuration, the effused fluid appeared to be in the great bursa under the tendon of the rectus, and the whole swelling resembling more rheumatic infiltration than phlegmonoid abscess.

On the day following, the appearance of swelling, &c. around the knee, the right wrist displayed an inceptive stage of inflammation, intumescence, &c. similar with that of the left, but the patient now began to sink sensibly under the exhausting effects of protracted fever, complicated with local irritations calculated to react with serious disturbing influence on the constitution, and his death happening two days after the commencement of the affection of the right wrist, prevented complete development in this new seat of symptomatic inflammation.

Examination after death disclosed the following state of parts at the points of abscess formation. The primary seat of the matter at the top of the sternum was empty, but five or six ounces of gangrenous pus was found diffused between the greater and less pectoral muscles, the matter accumulated along the line of the right clavicle, chiefly toward its humeral extremity; no matter appeared above the clavicle. The sternal end of the right clavicle was loose, separated from the sternum, and standing above it. The articular surface, bare, rough, and sensibly wasted by ulceration, the interclavicular ligament, the anterior and posterior, with the proper capsular ligament of the right clavicle, were destroyed, the end of the clavicle was of a deep dark red colour. The head of the sternum was, more than any other part, the seat of necrosis; it was carious for an inch downward, and what was remarkable, had separated into three pieces; one remained adherent to the left clavicle, (which was not disarticulated,) the middle portion lay loose and insulated, and a portion one inch long by three-fourths of an inch broad, was firmly united to the first rib of the right side and the right clavicle, the two latter remaining connected by the rhomboid ligament. The necrosed and separated portions of the head of the sternum, and the adjacent part of the body of that bone, like the end of the right clavicle, were of a dark red colour. None of the matter of this undefined gangrenous abscess had invaded the cavity of the thorax; the membranes within, under the head of the sternum, were but little discoloured, and not sensibly altered, except by some thickening.

The condition of the parts involved in the abscess at the left carpus, was the same as had been found at the top of the sternum. The ulna was disarticulated; its coronary ligament was destroyed; the carpal end of the ulna bare, partially carious, and of a dark red colour. The capsular ligament of the carpus was also in part destroyed, and the articular cavity filled with sanious pus; the bones forming that joint were all tinged with the hue of inflammation, but the two bones corresponding most nearly to the carpal end of the ulna were quite bare of cartilage, rough, and of a very dark red colour. The forearm was separated from the arm, and its muscles carefully dissected away, in order to preserve the carpus as a morbid specimen; and in this state the ulna presented a striking appearance at its humeral extremity. The olecranon, and the sigmoid concavity, but especially the coronoid process, were of a high red colour, not superficial, but evidently pervading the solid structure of the bone, as the colour was not discharged or diminished by maceration. The shaft of the ulna was of the same deep red hue for an inch in advance of the coronoid process, but in and around the latter the red colour was particularly intense. On careful inspection of those points of the ulna, I was convinced that the colour was an effect of a morbid state of the bone, and not a casual tinge from stasis, post mortem infiltration, or other common causes; the bones of the same arm no where else presented similar characters, and I could not but draw the conclusion, that had the subject of this violent disease lived a few days longer, abscess, with gangrenous caries, would have been developed within the elbow joint.

*Baltimore, Dec. 22d, 1828.*

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ART. III. *Remarks on the Use of Prussic Acid.* By GEORGE HAYWARD, M. D. of Boston.

**T**HERE can be no doubt, I think, in the minds of those who have any practical experience on the subject, that Prussic acid is possessed of valuable, as well as powerful properties, and yet, if I am not mistaken, the use of it as a remediate agent has diminished in no small degree within the three or four last years. This must be attributed to the extravagant praise that has been bestowed on it, to its having been extolled for properties which it does not possess, and recommended as a specific for diseases, over which it has since been found



to exert little or no control. The physician who expects to cure phthisis pulmonalis with Prussic acid will, probably, in every case be disappointed, and it is to disappointments of this sort we must look for the explanation of the fact, that this article is now ranked by most members of the profession below its real value.

It is, however, a remedy that should not be entirely overlooked, and when employed only in those cases in which its use is indicated, will be found not unfrequently a valuable auxiliary to the curative means we already possess. It is not my purpose in this article to give any thing like a full treatise on this medicine, but to call the attention of the profession to it, by stating my experience concerning it, indicating some of its properties, and some forms of disease in which I have found it useful. I shall briefly give the results to which I have arrived in my own mind on the subject, without a detail of cases, and point out the *preparation* of the article which I have used, the *complaints* in which it has been exhibited, and the *dose* in which it has been administered.

The Prussic acid which I first used was that known by the name of SCHEELE'S preparation, and is the same as that usually employed in Europe for medicinal purposes. It is very nearly of the same strength as that of the Pharmacopœia of the United States, but is less convenient, being more liable to decomposition. This is owing to the double distillation to which it is subjected in the process of making, which frees it almost entirely of sulphuric acid; that formed according to the pharmacopœia undergoes but one distillation, and a sufficient quantity of sulphuric acid remains to prevent it from speedily decomposing. Of late years, therefore, I have used the latter altogether, and have been unable to discover any difference between the strength of this, and of that of Scheele's preparation.\*

In confirmed phthisis pulmonalis, I am satisfied that the Prussic acid is of no service; on the contrary, I believe that it is oftentimes injurious. When the lungs are ulcerated, or when there are tubercles in them in a state of suppuration, attended with a frequent pulse, chills, heat, and night sweats, this medicine cannot be exhibited to advantage, and by checking the cough and expectoration, while the secretion of pus continues, will frequently be productive of mis-

\* The Prussic acid that I have been most in the habit of using has been made by Mr. Daniel Noyes, an excellent practical chemist of this city. I have found it of very uniform strength, and have never known it to decompose. He informs me, that when he prepared it in the old method, by a simple distillation, the decomposition was prevented by adding a small quantity of sulphuric acid to it.



chief. From the recommendation of European writers I employed this acid, soon after its introduction into the *materia medica*, in several cases of phthisis, and being uniformly disappointed in deriving any benefit from it, I was for a time inclined to abandon it altogether. But observing that in every instance it had a tendency to allay the irritability of the system, at the same time that it diminished the cough, the idea occurred to me that there was a class of pulmonary diseases in which it might be of benefit. Subsequent experience has satisfied me that this view of the subject is correct, and I have since been highly gratified with the effects of the preparation in numerous instances.

We often meet with patients, especially females, labouring under a cough of great urgency and violence, which is kept up by an irritable state of the system, and which sometimes seems to be increased rather than diminished by the ordinary remedies. Though there is no disease of the lungs at the time, if the cough be permitted to continue, an organic affection is likely to follow. In cases of this description Prussic acid will exert a most salutary influence, and not unfrequently allay in twenty hours the violence of a cough of several weeks standing. A lady had laboured under a nervous cough of this character for more than six weeks, and, from the violence of its paroxysms, had passed nearly sleepless nights during the whole of that period; all the ordinary remedies, such as blisters and expectorants, having been tried in vain, small doses of the submuriate of mercury combined with opium were administered till the system became affected, but yet no relief followed. The Prussic acid was then administered, and all other remedies laid aside, she slept several hours without interruption the first night after taking it, and within a week the cough was entirely gone.

In the latter stages of hooping-cough, when there is little or no congestion in the lungs, and no accumulation of mucus in the air tubes or cells, two or three doses of this medicine will oftentimes put an entire stop to the disease. In some cases I have seen it operate like a charm, a single dose being sufficient to give the little sufferer complete and permanent relief. It is only, however, in the latter periods of this disease that I should think it either judicious or safe to administer it, and at this stage I have given it to children of all ages, and in most instances with great benefit.

There is another form of disease in which I have employed Prussic acid, and in which I think it promises to be of great advantage, and that is painful menstruation. Within a few weeks a lady who, for two or three years past, has been in the habit of taking from six to

twelve grains of opium in a day during the period of her menstruation, without obtaining great relief, omitted, by my advice, in the three last returns of the catamenia, the opium, and took the Prussic acid, and she has since informed me, that she has not for years had so little pain at that period as under the use of this medicine. My experience with it, however, in this affection, has not been very extensive, but having seen decided benefit from its use in the few cases that have fallen under my notice, I shall not fail to employ it whenever a proper case of the kind offers.

In the various forms of hysteria this medicine may be advantageously employed, and I have been much pleased with its effects in lessening the violence of the paroxysms of this disease in some cases in which I have administered it. From the great power which it exerts over the nervous system, acting apparently as a more perfect sedative than any thing else with which we are acquainted, it would seem to be particularly adapted to allay the violence of hysterical affections.

It having been spoken of by Dr. GRANVILLE as an useful remedy for asthma, I gave it a trial in several cases, and regret to say, that I have never in a single instance derived the slightest benefit from it in this disease. We certainly should not conclude, reasoning *à priori*, that it would be advantageous, if we admit the pathological views which have been taken of asthma by Dr. WILSON PHILIP. He considers this disease, I believe, to be owing to a diminished energy of the respiratory nerves, and hence galvanism, by increasing this energy, affords relief.

Be the theory what it may, I should certainly not again administer Prussic acid to an asthmatic patient; not that I ever saw it produce any permanent injury, but I certainly never discovered any benefit, and have thought that it has sometimes prolonged the paroxysm of the disease.

These are the only diseases in which I have ever used this medicine, and I have briefly, but fairly, stated its effects. They have been such, on the whole, as to induce me to employ the article, in future, in other cases of the kind, though they have not been such, perhaps, as might have been expected, from the exaggerated accounts that have been published of the virtues of this remedy.

The dose which I have been in the habit of exhibiting is much less than what is frequently recommended, nor do I ever continue it more than three or four days, if a decided good effect is not produced in that time. Both these precautions appear to be necessary when the

terrible power of the article is considered, and the sudden manner in which it sometimes manifests its deleterious influence on the system.

My practice, in all cases in which I use this medicine, is to mix one part of the acid with one part of syrup of tolu and two parts of distilled water, so that the mixture contains but one-fourth part of acid. The advantage of this is, that the dose of the acid may be more easily increased in a minute quantity.

To adults I usually administer two drops twice a day, that is, eight drops of the mixture spoken of above, which is gradually increased till the patient takes eight drops of the acid twice a day. I never exceed this quantity, nor do I believe it to be necessary, if the medicine be good; I think it could not have been so in some of the cases which have come to my knowledge, where patients have been said to have taken *forty* drops three times in twenty-four hours.

To children under two years of age, to whom I have administered the Prussic acid for the whooping-cough, I have never given over a drop and a half at a dose, nor given more than two doses in a day.

There is one effect which has uniformly followed its prolonged exhibition in my practice, which is, the production of diarrhœa. It has not unfrequently happened, that this has been so severe and so little under the control of opium, that I have been compelled to suspend the use of the medicine. I mention this more particularly, as one or more writers speak of its power in checking the diarrhœa that usually comes on in the latter stages of phthisis.

Administered in the doses mentioned above and continued only for a short time, if decided benefit did not soon follow its exhibition, the Prussic acid has ever been in my hands a perfectly safe remedy, and though I have prescribed it to more than two hundred patients, it has not produced in a single instance any unpleasant symptoms.

*Boston, March, 1829.*

ART. IV. *Contributions to the Physiology and Pathology of the Nervous System.* By W. E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.

THE following cases are offered as contributions to our knowledge of the nervous system; a subject upon which the labours of GALL, of BELL, of SERRES, of FLOURENS, &c. have shed a flood of light, but many points of which require further elucidation, and still more remain involved in utter obscurity.

CASE I. *Chronic Hydrocephalus.*—Present, Dr. J. K. MITCHELL, attending physician, and Dr. S. JACKSON. Autopsy eighteen hours after death. Weather moderate.

Master M. aged eight and a half years; had his head no larger than usual at the period of his birth. At the age of six weeks symptoms of hydrocephalus were manifested, for which he underwent an active treatment which was continued for some time. As he advanced in age he began to walk; his head continued to grow inordinately; his stature was not much affected, and he reached almost the size which is common to boys of eight years. He could walk, run, and participated in the amusements common to childhood; was sent to school, where he learned very readily the subjects usually taught; was remarkably smart, sprightly, and intelligent in his conversation; was very fond of music, and learned readily a variety of tunes; his memory was also excellent.

For a long time after birth, the sutures of the cranium were open, and the fontanelles unusually large; the ossification was, however, finally completed, and the cranium became firm. The size of his head was so great that he attracted much attention; and he was apt to fall, especially forwards, from readily losing his equilibrium.

Dec. 12th, 1828, he fell against a door, and bruised his forehead on the left side considerably. In an hour afterwards he vomited, became very sick, and took to bed, and died the next evening about nine o'clock. The subsequent day, at three P. M. we proceeded to examine his head. Its dimensions were as follows: the largest horizontal circumference of the cranium measured around the frontal and parietal protuberances was twenty-eight inches; peripheral distance between meatus auditorii externi, nineteen and a half inches; peripheral distance from root of nose to occipital protuberance, nineteen and a half inches.

*Diameters measured with Callipers.*—Antero-posterior,  $9\frac{3}{10}$  inches



—Between parietal protuberances,  $7\frac{1}{2}$  do.—Between temples, back part, 7 do.—From chin to vertex, 10 do.—Between meatus auditorii externi, 5 do.

The bones of the cranium were of the thickness common to children of his age, and the sutures firmly fastened, the sagittal was continued to the root of the nose. There was an os triquetrum on each side of the frontal suture, but no other supernumerary pieces. The integuments of the head were thin and stretched.

The dura mater adhered firmly to the cranium, especially along the sutures. The pia mater was vascular; no pathological state was perceptible in the arachnoidea, either internally or externally. The convolutions were much shallower than usual, being about a third the common depth.

The lateral ventricles together contained *five* pints of limpid transparent serum, and were distended into perfect bags; the thickness of the cerebrum around them varied in places from four to eight lines. Having made a long cut from above into each lateral ventricle, I found the medullary surface of the ventricles disposed to separate itself from the contiguous part of the cerebrum. The corpus callosum was thinned to about one line, and stretched to the breadth of an inch and a half, and its raphe was semi-diaphanous. Beginning, therefore, at the corpus callosum, we peeled the upper circumference of the lateral ventricle off, as one would tear off paper from a wall; we continued to trace the layer along, and stripped off in the same way the lower circumference of the lateral ventricles, the layer coming off successively from the hippocampi, and from the thalamus; we found this layer continuous with the fornix which was raised up in the progress of this peeling process. I endeavoured to strip by the same process the surface of the tubercula quadrigemina and the valve of the cerebellum, by the continuation of structure with the surface of the thalamus, but it failed.

The process was executed on both lateral ventricles with equal facility, so that a medullary layer one line in thickness was stripped off completely from the whole periphery of each lateral ventricle, beginning at the corpus callosum and ending at the internal side of the thalami. It is worthy of specific notice that a cineritious layer of the same thickness, and continuous with the other, came off from the surface of the corpus striatum.

The septum lucidum was wanting in great measure, there being a free communication of the lateral ventricles of some inches in diameter between the corpus callosum and the fornix. The margin of the

imperfect partition formed by the septum was rounded, and had no appearance of laceration.

The cineritious substance of the cerebrum was softened, and followed the pia mater in stripping off this membrane. But the cineritious substance could not be detached clearly from the sub-cineritious medullary substance in consequence of their intimate coalition.

Taking then the thickness of the cerebrum into view, from its surface to the surface of the lateral ventricles, there were evidently made out three layers of matter, the external cineritious, then the sub-cineritious medullary layer forming the convolutions and their bases, and then the layer of medullary matter forming the periphery of the ventricles. These two layers of medullary matter seemed perfectly distinct from one another, 1st, by the almost spontaneous separation which they made when it first attracted our attention, and then the perfect facility with which the ventricular layer was stripped off universally from the other. 2d, In examining the vascular arrangement, it appeared that the adjacent surface of each had their capillaries branching out distinctly, as is the case with contiguous but distinct membranes elsewhere.

The capillaries of the encephalon were generally congested with red blood. The cerebellum, pons, crura, and the base of the encephalon was healthy. There was no sub-arachnoid infiltration anywhere, the convolutions being close and compacted.

The examination was not extended beyond the head.

For preparations of peripheral layer of ventricles, see Anat. Museum. This was the only part we were permitted to bring away.

I am indebted to Dr. J. K. Mitchell, the family physician, for the following minute history of the patient, in a letter to myself.

“ William M. was born in Philadelphia on the 4th of June, 1820, the fourth child of his parents. Although his entrance into the world was tedious, no remarkable difficulty attended his birth, nor was there at first perceived any peculiarity in his conformation. When about six weeks old, incessant cries and a distressing restlessness indicated the existence of pain, and in a few hours he became incapable of drawing nourishment from his mother, making many fruitless essays with a smacking sound. A physician, after examining his mouth, and dividing the *frenum linguæ*, expressed some fears of the occurrence of disease of the brain. Severe and protracted diarrhœa soon followed, and a very manifest enlargement of the head confirmed the opinion of the medical adviser.

After a variety of treatment, the general health of the child was restored, and continued unimpaired until about a month before his decease, which happened on the 13th of December, 1828, when in the 9th year of his age. During the whole of this period of nearly eight years, his head continued to enlarge without being connected with the slightest head-ache, or any functional derangement whatever. The bones of the cranium became firmly united, and the fontanelles closed in his fifth year.

When fifteen months old the child spoke well, and at eighteen months was able to sing a variety of musical airs with tolerable correctness; and always exhibited a strong predilection for music.

Nearly four years elapsed before he was able to balance himself on his legs; and he was not a confident walker until five years of age. Indeed, the great weight of his head rendered him always very liable to falls, and caused him frequently to impinge upon his forehead. Sometimes, when at school, he fell backwards from the form.

His intellectual faculties generally were very respectable, and his powers of observation rather remarkable. But his memory both of language and sentiments, was such as to create surprise in those who took the pains to converse with him. The following example of his powers of recollection may not be amiss. A customer of his father having been absent two years, returned, and on his entrance into the shop, saluted as an acquaintance its inmates; but they had forgotten him. On turning to little M——, the latter immediately called him by name, inquired kindly about him, and then told him that he had not been to see them for two years.

Of a grave and quiet temperament, he preferred the society of his seniors, and took little interest in the common pastimes of childhood. Only sedate children were agreeable to him.

For so youthful a person, his sentiments and affections were of a lofty character. Seeing the distress of his mother, when commercial affairs took his father to Europe, the child, then five years of age, said, ‘Father will soon be back; if he dont come again, I will be a husband to my mother, and will work for her and take care of her when she is old.’

For two years before his death, little M. became affected by religious impressions, which grew stronger and stronger until his death. Often advising others, he presented in his own conduct a fine exemplification of his principles, being distinguished among the children of the family and the school, for love of truth and general sincerity of character. At length, even while in full health and vigour,



he spoke of death as a thing to be desired; and when dying, expressed pleasure at the approaching crisis.

On Sunday evening, several weeks before his decease, he was seized with severe nausea and vomiting, which having subsided, returned on the following Sunday, and so on with weekly intervals, until, on Friday, the 12th of December, a severe fall, followed in eight or ten hours by like symptoms, terminated his existence.

During his short illness, he referred all his pain to his stomach, and never complained of head-ache or vertigo. His pulse became gradually slower and more feeble, the temperature of the surface declined: but his mental faculties, and his affections, remained unchanged until he was in *articulo mortis*.

The singular nature of this case, together with the curious anatomical facts disclosed by your *post mortem* examination, induced me to make a minute inquiry into the history of the subject of it, previously to the period at which I was called to visit him, which I now beg leave to convey to you."

**CASE II.** *Dropsy of Brain and Tumour on Cerebellum producing Hemiplegia, Blindness, Deafness, Loss of Touch, &c. &c.*—Mrs. Rebecca D. ætat. about thirty, the mother of two young and healthy children, and of a good constitution, was taken in the spring of 1827, with symptoms of paralysis after some slight indisposition. I saw her in August, and the symptoms were then, intermittent loss of vision in left eye, slow winking on that side, difficulty of hearing, and of articulation, loss of taste on left side of tongue, pain in the back part of the head, incessant roaring in her left ear, mouth drawn to right side. Diminished myotility in left upper and lower extremity, and inclination of the body to that side when sitting; in walking across the room with assistance, she invariably swerved from the straight line towards the left side, so that her motion became diagonal to the left.

She also complained of pain in the bladder, especially on making water; and whilst I was examining this organ a few days afterwards with a catheter, she was suddenly seized with an epileptic fit, to which, under the name of faintings, she had been subject for several months, having had attacks upon any sudden emotion even when a girl.

Her functions in other respects were healthy, and her menses regular.

I treated her by adopting repeated leeching to the temples, bleeding from the arm, blisters on back of neck, and on temples; light nutritious diet, with some ligneous teas, as sarsaparilla, valerian, and



from time to time, from three to five grains of blue mass or cathartic pills of aloes and calomel daily. She improved so much under this treatment in four or five weeks, that she ceased to occupy her bed habitually, improved in flesh, could, by clinging to the furniture, take her turns around the bed room, and finally got down stairs. The several symptoms stated, all got better, excepting the roaring and pain in the head.

With occasional slight changes for better or for worse, she passed through the winter. In the March of 1828, the symptoms being stationary, Dr. PARRISH was joined in consultation, and upon his suggestion, rust of iron was taken to the amount of eight or ten grains three times a day, and an issue was permanently fixed on each side of the head after she had been twice blistered all over it. This treatment was persisted in for two months without benefit; her mouth became sore from the steel rust, and she complained of its heating her stomach.

In the progress of this part of the treatment, I observed for the first time, though the symptom might have been constantly present, that there was a loss of sensation in the skin of the left side of the face, from the middle line backwards, and that the left conjunctiva was also torpid, so that it like the skin might be scratched with the end of a straw without her feeling it.

Her epileptic paroxysms during all this time recurred irregularly at intervals of ten, fifteen, or twenty days. In the latter part of June, 1828, she went into the country by advice, and was absent till about the end of August. On her return, the symptoms were for the most part aggravated. She had become thinner; her stomach rejected frequently its contents; I thought that this might arise from emetics of twenty grains of ipecacuanha each, having been administered to her in the early part of the summer three times a week for four or five weeks in succession, just before she left the city. The value of this opinion will, however, be seen from the dissection. The blindness of the left eye, which formerly had been only intermittent, now prevailed incessantly, with occasional blindness of the right also, the deafness of the left side had increased with the noise and pain in her head at the back part; insensibility of left side of face the same; to this was added a diminished myotility in it, keeping it almost stationary when she talked; left side of tongue insensible to taste, mouth drawn somewhat to right side, myotility of left extremities also diminished, but no want of sensibility in their integuments.

Her menses had now been suspended for four months, and her

bowels were disposed to constipation; there was a more frequent recurrence of the epileptic paroxysms.

From this period, (August 28th,) till the day of her death, (October 19th, eleven o'clock P. M. in an epileptic fit,) the symptoms increased regularly and gradually, total blindness supervened for a month previous to death, she could no longer sit up out of bed with any comfort, her articulation became thick and slow, her swallowing difficult and slow, and when the food was down it was frequently brought up again involuntarily; and what was remarkable, the process was a sort of ruminating one, for she could immediately after swallow with an appetite, and digest well; this leads us to infer that the mucous coat was sound in its office, and the muscular alone irritable. Her epilepsies occurred three or four times or oftener in the day, sometimes not so often.

The night before she died, she became conscious of the presence of a candle in the room by its light, but she could not distinguish objects. Her intellects never failed; they remained good to the last, excepting that sort of indifference and dulness which always attends a long sickness and solitude.

Her bladder at various times during my attendance continued irritable, but for a few weeks before she died she ceased to complain of it. About the middle of September it was ascertained that the interruption to her menses proceeded from pregnancy.

By a very gradual process she approached her last moment, becoming weaker and weaker, until life was finally extinguished in the epileptic paroxysm of the evening of the 19th.

*Autopsy* on the evening of the 20th, twenty hours after death—present, Drs. PARRISH and PANCOAST.

Exterior aspect, no putrefaction, countenance placid; middle marasmus; no settling of blood in face.

Head. Scalp bled freely on being cut across from ear to ear. Bones of middling thickness.

Membranes. Dura mater of healthy colour and texture, but drier than usual along the middle line of the head; for half an inch or an inch from longitudinal sinus, on either side an unusual number of granular bodies like the glands of Pacchioni, and supposed to be so, they pitted deeply the bones; in the sinus they were not unusually abundant or large. Arachnoidea and pia mater healthy, but they also seemed half dried, and the vessels of the pia mater were not unusually turgid; indeed they were rather collapsed. These membranes adhered very closely to one another, there being no sub-arachnoid effusion;

they also adhered to the dura mater along the longitudinal sinus more than usual, seeming to stick to it.

The texture of the cerebrum was healthy, except that it seemed rather more collapsed and flaccid than usual. Its ventricles contained together six ounces of a clear transparent serum, and were very much distended by it, the corpus collosum being lifted up considerably from the fornix, and the septum so thin that it was almost torn. The fornix adhered more than usual to the velum interpositum, and the latter was turbid or opaque where it passes into the ventricles. The ventricles communicated freely. No thickening of their arachnoidea was perceptible, nor distention of their vessels.

**Cerebellum.** It was universally very flaccid, so that it could not retain its shape, but flattened itself by its own weight. On the under surface of its crus of the left side, there was a flattened oval tumour which originated from the crus, and had grown to the size of a hen's egg, extending itself forwards upon the side of the pons, and flattening it in. This tumour consisted in a congeries of cells of various sizes, the walls of which were in a semi-cartilaginous state, and some of them containing serum, others a tuberculous-like matter, and others again a red spongy bloody matter. The most familiar comparison of it is with the ovary in the beginning of its cellular dropsies. This tumour had raised up in its development a part of the lateral substance of the cerebellum and the corresponding pia mater and arachnoidea; its first aspect was more like a cyst than any thing else on the side next to the crus of the cerebellum.

The tumour had disturbed the position of all the nerves, from the fourth to the ninth inclusively, because in its development they had to pass along its under surface, and were both displaced and stretched by the circuit they had to perform. The trigeminus was absolutely torn off except a few filaments, from the attachment of its root at the pons, and was there almost absorbed; and what remained of its filaments were separated and pressed into a flat fasciculus. The medulla oblongata was pushed to the right side by this tumour, and bent.

**Thorax.** *Pleuræ.* Adhesions between right superior lobe and thorax; in other respects healthy.

**Lungs.** Generally sound and healthy; settling of blood at their posterior parts. Right superior lobe contained half a dozen separated tubercles, the largest six or eight lines in diameter. They were of that dry, crumbling, cheese-like kind, which look like old crude tubercles aborted, and which are not attended with derangement of the contiguous pulmonary structure, but merely push it aside. **Heart.** Natural size, firm and healthy.

Abdomen. Peritoneum healthy. Stomach, mucous coat empty, and of a sienna colour, excepting about the antrum pylori, where it was more of a pink colour. Small intestines healthy. Large intestines healthy; contained but little flatus, but filled with hard, dry compacted fæces, which extended itself for some inches into ileum.

The uterus was up to the umbilicus, had pushed up the intestines, and was next to the abdominal parietes, triangular, and contained a foetus of about six months, laying across the abdomen, the head to the left corner, and the buttocks to the right corner. The collection of fæces seemed to have arisen from the uterus pressing on the rectum, as her common position was on the back.

ART. V. *On the Contagious Nature of Dengue.* By S. H. DICKSON, M. D. Professor of the Institutes and Practice of Medicine in the Medical College of South Carolina.

IN my paper on Dengue, published in the November (1828) number of this Journal, I advanced the opinion that it propagated itself, as well by a contagious influence as by an epidemic distemperature of the air. It seems that the majority of the writers who have noticed it have been disposed to deny its contagiousness. This question perhaps deserves further examination, and must be decided ultimately by a reference to facts.

I cannot help thinking it somewhat singular, that in most of the essays alluded to, the circumstances offered as proving the *epidemic prevalence* of the disease, are regarded as disproving its contagious power. But no one at all conversant with the history of disease, can entertain a doubt of the strong tendency of a great number of maladies confessedly contagious, to become epidemic also; small-pox, measles, hooping-cough, all afford familiar illustrations of this principle. To these we may add the plague and typhus, which, if contagious, do not merely confine themselves to this mode of transmission and extension. I did not by any means deny, but rather dwelt upon the very great rapidity with which this singular affection showed itself in different and distant parts of our city, which indeed seemed to me totally inconsistent with its exclusive communication from one subject to another by immediate contact or near approach.

What was the source of this disease? Whence its origin? How was it introduced among us? Were there any circumstances common



to the several places in which it made its appearance, by the agency of which we may account for its production?

We hear of it in Bengal in 1825. It cannot have been transported directly across the ocean, because of the exhaustion of the material during the long voyage to America. A gradual extension of it, however, from point to point takes place, and we find it, accordingly, after the silent progress of a year and more, among the islands of the Caribbean Sea, in the autumn of 1827; successively affecting these islands during the winter, it reaches Cuba in the spring of 1828, from whence, in June and July, it obtains easy access to Charleston, New Orleans, Vera Cruz, and Carthagená. In each of these cities it is obviously and in common opinion attributable to contagion, and is regarded as imported from some position in which it was known previously to exist. But physicians, scientific men, dispose of this view of the matter by the allegation, undoubtedly true, that the disease, *when introduced*, spreads itself by epidemic influence! But thus spreads on certain occasions variola, thus measles, and hooping-cough, after being unequivocally imported in a known and obvious mode.

It is a matter of acknowledged difficulty to prove to absolute demonstration, the contagious nature of any form of disease which is not capable of being communicated by inoculation; this is the *experimentum crucis*, which, when it can be applied, puts the question fairly to rest. Few physicians, however, if any, will deny that there are cases in which the contagious virus is impalpable, and diffuses itself immediately when generated, and eliminated throughout the surrounding atmosphere, so that its presence is not cognizable by the senses. In instances such as these, an attentive observation of all the circumstances of their origin, history, and progress, offers us the only means of arriving at a probable conclusion concerning their nature and properties. Rational probability, indeed, is the utmost that we can here attain, and an ingenious caviller may always succeed in throwing in our way objections and difficulties which shall oppose themselves to any positive decision of the point in dispute. Thus the contagiousness of several shapes of pestilence, of plague, of typhus, and even of rubeola and pertussis, has been and still is denied by certain medical sceptics. But the preponderance of the evidence in favour of their possession of the alledged quality, is such as to have satisfied an infinite majority of the profession, and to amount to a very reasonable degree of certainty.

In all such discussions, the first step to be taken is to decide upon the relative value of negative and affirmative statements, and here I

would lay it down as an absolute rule, as HALLER has done in philosophy upon physiological experiments and deductions, that negative observations are entitled to little or no weight, when in opposition to positive assertions. If, for example, a very few instances were brought forward, upon creditable testimony, of the spread of any infection in certain specified communities, numbers would be of no further value than this, that they should, by diversity of position and circumstance, obviate the suspicion of a local cause common to all affected. Suppose it to be declared that a certain malady being introduced into five such communities had spread itself among them, seizing a few, many, or all within its sphere, it would be to no purpose to reply to the inference of its contagiousness drawn from this statement, that in twenty, fifty, or one hundred other such instances of introduction, it had failed to occasion any such extension.

Contagion is, perhaps, of all the morbid agents which produce disease in the animal constitution the weakest, and requires the greatest number and variety of favouring circumstances to ensure its disturbing impression. On the other hand, that which we allude to in the old phrase of SYDENHAM, as "the epidemic constitution of the air," is vastly the most powerful and pervasive. Every physician has failed occasionally in transmitting small-pox and vaccine by the most careful inoculation. But when the former becomes epidemic, it is known to affect persons who have been most carefully secluded, and guarded with the utmost nicety against all imaginable modes of accidental approach either to diseased subjects or any shape of fomites.

The sphere of action of contagion is contracted within narrow limits; HAYGARTH, O'RYAN, and others do not allow of its radiation to a greater extent than a few feet, say three or four. RUSSELL prescribed for the plague from his window, and even approached within four feet of the sick, with safety. Like all other morbid agents, it requires, to produce its evil influence, a certain degree of concentration, which is obviated readily, whether of purpose or incidentally, by ordinary cleanliness and free ventilation; the former is operative by the avoidance of all accumulation of deleterious secretions, the latter by their solution, diffusion, and dispersion in the air. Even Prussic acid must be administered in an obvious dose, or in an intense state of concentration, to kill; and malaria in all its modifications is more dangerous in calms than in stormy weather. The difference between a common poison and a specific virus is, however, remarkable in the modes in which they are severally affected by this dilution or avoidance of concentration. We modify by dilution the *intensity* or *degree* of effect of a poison, and it is by such management

that we obtain salutary or remedial influences from many poisons. By similar dilution we cannot modify, though we may prevent, the effect of a virus; the degree or intensity of whose action we can only diminish by altering the condition or predisposition of the recipient. Thus the one-hundredth part of a drop of variolous or vaccine matter, will as thoroughly pervade the system, and as forcibly and permanently impress the constitution, as any larger amount of the same agents.

Further, when we take into view the general, nay, we might say with propriety, the universal absence or negation of predisposition to contagious disease, and the so frequent want of susceptibility of its influence, we shall rather wonder that such diseases spread themselves so often and so far as they do, than that they should be confined within certain observable limits both as to the extent of transmission and number of subjects.

Epidemics depend upon and owe their spread to a cause diffused through the air of any region, and deteriorating in some obscure way the purity of the atmosphere, which assumes itself a poisonous power, and becomes capable of generating in living bodies surrounded by it a predisposition to and preparation for a specific condition of disease: this "epidemic constitution of the air" is then both a predisposing and exciting cause. Yet even epidemics, varied and powerful as they are in their influences, fail to affect numerous individuals within the spheres of their prevalence, either from original and opposed peculiarities of habit, or from engrossing, though it may be transient, conditions of body. Now contagion is a mere exciting cause, which, in affecting a healthy individual, has to contend not only with occasional want or deficiency of susceptibility, but also with almost universal absence of predisposition, which alone may be said to constitute a triple shield of defence. It depends, moreover, for the efficiency of its application upon near approach to its source, and upon a certain degree of concentration. These considerations offer abundant and satisfactory explanation of the failure of contagions, for the most part, to spread themselves in country places and in thinly populated neighbourhoods. Let it be regarded then as proof of ignorance and presumption, to put on the common air of triumph in suggesting the question, "Why Dengue, being contagious, did not extend itself over the whole surface of our continent."

It is usually a difficult task to point out the precise source and origin of any form of disease, yet the difficulties are not in all cases insurmountable. With respect to what are called general epidemics, the attempt has been notoriously futile. Not so, however, in the in-



stance of local epidemics, among which Dengue, if its contagious nature be denied, must of course be ranked. These are always limited to particular season and temperature, as pneumonia typhoides, or to certain localities and circumstances of soil and surface conjointly with season and temperature, as bilious remittent, dysentery, and yellow fever; or to particular and cognizable alternation of conditions of the atmosphere, shown by the thermometer, hygrometer, and barometer, of which catarrhs and pleurisies, &c. furnish exemplifications. But Dengue has in its brief history shown no correspondence with any of these, being neither limited by season of the year nor locality, nor any cognizable atmospheric changes.

Dr. OSGOOD of Havanna, has suggested that its cause and origin are identical with those of yellow fever, and such an opinion from authority so respectable, merits a deliberate reply. I would present the following discrepancies as sufficient to remove all suspicion of any relation or connexion between the two diseases.

Yellow fever in Charleston occurs only in the autumnal months, prevailing in August, September, and October. I have not known of a case earlier than the 25th of July. Few have ever appeared in that month. It is the disease of strangers, occasionally attacking native children. I will not absolutely deny that it has assailed a native adult or an old resident; but such instances are rare in the extreme, so extraordinary indeed, as scarcely to deserve being noted as exceptions. They are more infrequent than second invasions of measles or small-pox. It has never been known to assail an African negro. It never extends itself into the surrounding country, and notoriously respects particular elevated, airy, and salubrious spots in the city and suburbs.

Dengue made its appearance here in June, and spent its force before the end of July. It attacked promiscuously native adults, old residents, strangers, and children; and negroes, whether natives or Africans. It spread, as I will hereafter show, in the neighbouring country, and allowed no exemption to any location of town or suburban residence.

I conclude this brief essay by a plain recital of certain facts which seem to me to afford satisfactory evidence in the power of Dengue to spread itself by contagion. I give the history of its introduction into our city in the very words of the two gentlemen who first met with it, concerning the weight and value of their testimony, there can be no necessity for a single remark from me.

The first note subjoined, is from my friend and colleague, Dr. THOMAS G. PRIOLEAU, who writes as follows:—



"DEAR SIR—The first case of Dengue which I saw last summer, was on the 10th of June, in a negro fellow belonging to Mr. S. Burger. He was labouring under high fever, and suffering the most distressing pains in the head, back, breast, legs, and arms, particularly in one hand. His attack two hours before was sudden, and while on board of the brig *Emmeline*. The captain of the brig, who was a few days before from the Havana and the Matanzas, mentioned to Mr. Burger that he had been sick with the Dengue a short time before leaving port, and that it was the same disease his fellow now had.

"The history of the case was this: soon after the arrival of the vessel here, from particular circumstances the crew were discharged, and this fellow sent on board of her to clean and take care of her. He remained on board three or four days, and at night slept on deck or in the cabin; she was neither offensive nor filthy from his account.

"On the third day he was convalescent. The vessel within a day or two was sent up to Knox and Pritchard's wharf, and Mr. Kirkwood, a shipwright, was engaged to work on her; his residence was within one hundred yards of the place at which she lay. On the 23d, one of his children who had been playing on the wharf sickened, and on the next day another was taken ill. On the 30th, Mrs. Kirkwood, and Mr. K. himself on the first of July.

"From the 20th of June to the 1st of July, there were several cases of the disease in that neighbourhood, both in families and among the negroes. From this spot it appeared to spread as from a centre. On the 1st of July I mentioned most of these circumstances to the Medical Society, and understood from the members present, that neither had seen a case of the disease. Soon after, it spread rapidly through every part of the city.

"I am yours, &c.

"THOMAS G. PRIOLEAU."

On the same subject Dr. PHILIP G. PRIOLEAU writes thus:—

"DEAR SIR—In reply to your note requesting me to state the circumstances of the first occurrence of Dengue under my care, and its mode of introduction into our city, I with pleasure give you the following facts.

"The first cases of Dengue which came under my care, were in the family of Captain J. Wellsman, in Church street, two doors south of Tradd street. Two of his daughters were smartly attacked with the disease on the 1st of July. On the 2d, his son was taken down; in three or four days another daughter, and in a short time after it extended to the rest of the family. Upon inquiry, I found that Captain W. had arrived in Charleston on the 31st of May, after a passage of five days from Havanna, where the Dengue then raged; that he was attacked with the disease the day before he sailed, and was sick when he arrived here. Mrs. Wellsman was taken on the 20th of June, and was suffering under its rheumatic effects when I was called to see the children on the 1st of July, as above stated.

"With great regard, yours, &c.

"PHILIP GENDRON PRIOLEAU."

I shall not offer a word of commentary upon the lucid and positive statements contained in the foregoing letters. They appear to me to

establish beyond controversy the fact that the Dengue was imported, and point out the instruments of this importation.

If further proof be wanting of the contagious nature of the malady under consideration, it will be found in its transmission by diseased subjects into communities and families situated far from the influence of our city atmosphere, and of course removed from the epidemic disposition which is acknowledged to have existed.

Among many instances to this purport which might be detailed, on Charleston Neck and in various points in the country, I have selected two as abundantly sufficient for my present object. The particulars of the first will be found well detailed in a note from a clerical gentleman of great intelligence and extensive reading. It may be proper to premise that Haddril's Point is a high bluff, projecting into our harbour about four miles distant from Charleston, in a north-easterly direction, singularly noted for the unrivalled salubrity of its air. During the prevalence of our endemic fevers, Haddril's has, from time immemorial, proved a safe and agreeable retreat.

"MY DEAR SIR—In compliance with your request, I beg leave to state such facts in relation to the Dengue as came within my personal experience or observation. My family resided last summer at the village, Haddril's, but I spent my time principally in the city until July, when the above-mentioned disease became prevalent.

"Being seized with its symptoms, I retired to the village, and remained there until I had recovered my health. No instance of the disease had occurred there previously, but a short time afterwards several persons were attacked. Not more than half the adults in the same house with me became subjects to the disorder, and their sickness did not commence until several weeks after my own.

"A neighbour similarly situated with myself carried the disease from the city into his family, of which all the adult members became infected.

"Another neighbour, who had not visited the city, was violently seized immediately after coming out of a close apartment where a negro was suffering under the complaint, which he had contracted in town.

"In addition to the above statements, it may be proper that I should remark that most of the inhabitants of our village who did not go to the city during the prevalence of the disease, remained wholly unaffected; and that those who had it without being exposed to the city atmosphere suffered far less severely than others.

"Your's, &c.

A. W. LELAND."

The second instance, (with which I shall conclude,) refers to a plantation lying south-west of Charleston, about three miles beyond Ashley River. I give the history as I received it from the family physician, Dr. J. A. JOHNSON.

“Mr. B. Adams was the first of his family who was attacked with Dengue. About the first of August, Mr. A. with one of his negroes, had occasion to visit Charleston; about a week afterwards they were both taken ill. Mrs. A. who had not been to town, was next seized, after an interval of about a week. The disease then went regularly through the family, (a large one,) with the exception of but two.”

A similar extension of it among the negroes took place, though not to a great extent. Dr. J. adds that there was an obvious difference in the degree of violence between the cases of those who had been exposed to city air and those who had not, the latter suffering more slightly.

This distinction was indeed generally observed, yet it was not invariable. Some *very severe* cases occurred under my own notice on the Neck and in the suburbs, among persons who had not exposed themselves by visiting the city.

The importance of the subject will, I think, justify the minuteness of detail into which I have gone in the relation of the facts above set down. I offer the same apology for the use I have made of the names of those from whom I derived information; it seemed to me that the value of my authorities would thus be better known and more fairly estimated. I have employed their very words, in order that I might avoid the danger of mingling my opinions and inferences with the plain recital of incidents, from which every one should be left to draw his own deductions.

I now leave the question willingly to the candid and impartial decision of my professional brethren.

*Charleston, January, 1829.*

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ART. VI.—*Case of Wound of the Femoral Artery successfully treated.*

By WILLIAM G. DICKINSON, M. D. of Franklin, Tennessee.

AT ten P. M. on the night of the 25th March, 1828, I was called in haste to see Mr. James C. Hill, merchant, a young gentleman of moral habits and fine health, who it was said had been stabbed and was dying. I found him ten minutes after the reception of the injury, lying on his back, covered with blood, and with both hands holding the edges of the wound firmly in contact. The wound was a little below the external abdominal ring, and just exterior to the spermatic cord of the right side, and nearly in the direction of a line drawn from the upper portion of the symphysis pubis, to the inferior



spinous process of the ilium. A large tumour extended from the ilium to the pubes, and the right half of the scrotum was distended to four times its natural dimensions, of a dark purple colour.

I relieved the patient from the necessity of closing the wound, by placing the forefinger of my left hand over it. At this moment, (the hæmorrhage not being effectually restrained,) the blood flew to the distance of several feet. It was not known, at the time, with what instrument the wound had been inflicted, and although the external orifice did not exceed five-eighths of an inch in length, the frightful quantity of blood, in which he was literally drenched, together with what he had previously lost, the cold surface of his body, and a pulse scarcely perceptible, convinced me that he was not in a condition to sustain further loss.

I was not satisfied what vessel had sustained the injury; the situation of the wound, together with the great size of the tumour on its pubic side, and the enormous distention of the scrotum, seemed to indicate that it was the spermatic artery. It was not possible, however, to ascertain the direction of the wound by examination, without imminently endangering the life of the patient; for although I commanded the external hæmorrhage, I was aware that it was not suppressed, as the tumour continued to enlarge and extend itself on all sides. This circumstance was in one respect a favourable indication, inasmuch as it went to prove that the wound did not extend *into* the cavity of the abdomen.

DRS. R. H. CAMPBELL and T. STITH having come to my assistance, I made an incision, two inches in length from the wound, towards the symphysis pubis and over the most prominent part of the tumour. After going as deep as prudence seemed to sanction, and finding nothing but an injected cellular structure, another incision, three inches in length, was made towards the spinous process of the ilium, in the direction of Poupart's ligament. So soon as the skin and cellular tissue were divided by this incision, the blood gushed forth with considerable velocity. I instantly passed my finger into the opening, and guided by the warm jet of blood, placed it on the femoral artery. About one-third of the artery's circumference was divided directly at the point of its exit, from under Poupart's ligament. This ligament was also divided, at its lower margin, apparently to an extent equalling the breadth of the instrument by which the wound was inflicted.

The wound being cleansed, it was evident that the hæmorrhage was completely controlled by the pressure of my finger: in fact, it was so entirely suppressed, that Dr. Stith proposed to confide the



case to compresses and a bandage. To secure the vessel conveniently, it was found necessary to make an incision an inch and a half in length, in the direction of the femoral artery. Constant pressure being necessary to prevent a recurrence of hæmorrhage, some difficulty was encountered in passing the ligature. It was, however, finally effected by a directory and needle, which last instrument was firmly grasped in a pair of small forceps. The ligature being divided, one portion was carried as high as possible, and firmly tied; the other as low as the detachments would permit, and also firmly tied. The ligatures used were of silk, in preference to the animal suggested by Dr. Stith.

All pressure being removed, the wound neatly sponged and left exposed for some time, and no hæmorrhage recurring, the parts were brought in contact and secured by adhesive strips, over which a compress and bandage were applied. The patient's legs were flexed and well supported, and his situation rendered as comfortable as circumstances would permit.

He was left to repose at three o'clock A. M. after taking tinct. opii gutt. 30; pulse 95. He had taken during the operation  $\frac{3}{4}$ ss. camph. tinct. opii and some undiluted spirit which he said was tasteless.

26th. Slept none since the operation; complains of pains in different parts of the body, but more particularly in the knee and muscles of the leg of the right side; no appreciable difference in the temperature of the two extremities; pulse 92; at intervals during the day took a little chicken water, and at night a cup of tea; no pulsation in the leg, and in the evening rather cold; gentle friction ordered; at night took  $\frac{3}{4}$ ss. Epsom salts in three doses. At ten o'clock at night, slight pulsation at the internal ankle was perceptible to Dr. O'BRYAN, who was with him.

27th. Slept three hours during the night; salts operated well; felt relieved by their operation. Ten o'clock A. M. pulse 85, and quite perceptible at the ankle; still complains of pains in the joints and muscles of the right extremity; ordered friction and passive motion of the ankle and knee joints; a cup of tea for breakfast, and light soup at noon. Four o'clock P. M. pulse 96; too much company; slept half an hour in the evening. Eight o'clock, pulse 85; took a cup of tea; being restless, tinct. opii gutt. 30, were given at twelve o'clock.

28th. Slept two and a half hours after taking the opiate; pulse this morning 80, and regular; ordered for breakfast tea and a little toasted bread. Six o'clock P. M. pulse 75.

29th. Passed a restless night. At four o'clock A. M. took tinct

opii gutt. 30, after which he slept two hours. Eight o'clock A. M. pulse 100. Ten o'clock, ordered salts, which operated well, and afforded considerable relief. Six o'clock P. M. pulse 80. Eight o'clock, wound examined; it had united throughout, except at the exit of the ligatures and the angle of junction of the incisions, at which point there was a suppurating surface, about an inch and a half long, and half an inch broad, presenting pus of a healthy character; the edges of the wound were drawn in contact by adhesive slips; ordered tinct. opii gutt. 40, to be taken at eleven o'clock.

30th. Slept but little, notwithstanding the opiate. Six o'clock, pulse 100; ordered coffee for breakfast, and a little rice at noon; slept several hours during the day. Four o'clock P. M. pulse 84, and soft.

31st. At ten o'clock last night took tinct. opii gutt. 30, but passed a restless night. At six o'clock this morning had a natural evacuation from his bowels. Eight o'clock, disposed to sleep; pulse 100, and vibrating; diet as yesterday; wound looks well.

April 1st. Rested better last night than he has done since the accident; took no opiate. Six o'clock A. M. pulse 80, and soft; took Epsom salts  $\frac{3}{4}$ ss. which operated well; diet as yesterday; the wound looks well, but the pus a little tinged with blood.

2d. At one o'clock A. M. took tinct. opii gutt. 25, in part to relieve a disposition to cough, which has become troublesome, and irritates the wound; the pus considerably tinged with blood, but the wound healthy in appearance; pulse 100, with some heat of the skin; diet as usual.

From this period his improvement was gradual, until the 11th, when the lower ligature came away; the other ligature remained until the 18th, when it was withdrawn without difficulty. The wound presented a healthy aspect until the 27th, at which time its appearance was irritable, and the discharge unhealthy. This change was produced by circumstances of an exciting and disagreeable nature. Ordered a more nourishing diet. From this to the 31st the improvement was rapid, at which time the wound was entirely cicatrized.

Mr. Hill has since enjoyed uninterrupted health, and experiences no inconvenience from the accident; and is actively engaged in his usual avocations.

*Franklin, Tennessee, Jan. 25, 1829.*

ART. VII.—*Experiments to prove the Existence of a Peculiar Physico-organic Action, inherent in Animal Tissues, called Endosmose and Exosmose.\** By JOSEPH TOGNO, M. D.

THE following experiments were suggested by the perusal of Dr. DUTROCHET's interesting memoir "On the Intimate Structure of Animals and Vegetables, and on their Motility," and especially by the chapter entitled "Observations and Experiments on the *Turgid State*." The actions of endosmose and exosmose seemed to throw so much light upon the process of absorption and secretion, especially the exhalation of fluids into cavities constituting dropsy, that I felt desirous of repeating the experiments of Dr. Dutrochet, and of extending them to the membranes which are the seat of dropsy.

Absorption is generally divided into *external* and *internal*.

The former, according to CRUICKSHANKS, HEWSON, HEDWIG, &c. is performed by a set of vessels arising immediately from the free surface of the digestive mucous membrane, the orifices of which they assert having distinctly observed; whilst equally good authorities, as RUDOLPHI, MECKEL, CUVIER, and others, affirm that they originate from the soft and spongy substance which covers the interior of this mucous membrane, and which is capable of *imbibition*.

Of the formation of the orifices of the chyliiferous vessels we are at present ignorant, as well as in what the action of absorption consists. We know, however, these vessels must possess "*a peculiar action*," by virtue of which they take from the chyme the elements needful for the formation of a new fluid, *chyle*; but in what this "*peculiar action*" consists no physiologist has ever been able to explain satisfactorily. It has been ascribed by some to the compression of the intestinal parietes, which, by mechanical pressure, forces the chyle into the *gaping orifices* of the chyliiferous vessels; by others to the capillary attraction of the mouths of these vessels; again, by others, to a special sensibility together with an organic contractility of the absorbing *orifices*, &c. A very curious circumstance, worthy of being noticed in this place, and which was first observed by MAGENDIE, is that this absorption continues for some time after death, showing that the action of absorption does not entirely depend upon the laws of vitality, but on a physical action independent, to a certain degree, of vitality.

Recently, MESSRS. RIBES and MAGENDIE have revived the opinion

\* *Endosmose*, an impulsion or action inwardly, from *ενδον*, inward; and *απμωσ*, impulse; and *exosmose*, the reverse action, from *εξ*, out; and *απμωσ*, impulse.



of the ancients, that liquids are absorbed by the mesenteric veins, but in what manner, they have never pretended to explain.

These considerations on external absorption leave room to suppose that there is yet some mysterious action in this function, of which we are entirely ignorant.

We are still less acquainted with internal absorption; the greatest obscurity existing as well in reference to its phenomena as to its mechanism.\*

The lymphatics are distributed into two sets in almost every organ, the one superficial, the other deep-seated. Their mode of origin is unknown. Some anatomists admit between these vessels and the arteries a direct communication; others think that they open by a gaping orifice on the surfaces and into the structure of the organs. LIEBERKUHN asserts that at their extremity is to be observed a *small spongy vesicle*, in which terminates an artery and a vein. This observation seems to coincide with the mode of termination of the mucous membrane of the lungs, which terminates in small cells resembling a bunch of grapes, and the same structure is to be observed in the formation of the salivary glands, the liver, the pancreas, and follicles which are disseminated all over this mucous membrane, they being mere prolongations of this membrane, and all terminating in an infinite number of cul-de-sacs, the parietes of which are irrigated by very minute blood-vessels. It is in these cul-de-sacs that all secretions are produced. This structure of all secreting organs is particularly worthy of our attention; for we shall find it to be a very important clew to the discovery of the mode of function of all secretory organs, especially when we shall apply the principles to be deduced from the following experiments.

The lymphatic ganglia are considered by HALLER, ALBINUS, HEWSON, MECKEL, &c. as being clusters of lymphatic vessels; MALPIGHI, NUCK, HUNTER, and CRUICKSHANKS assert that these are here interrupted by *small cells*.

With respect to the mechanism of this function, M. HUTIN, in his *Manual of Physiology*, says, "The mechanism of this function is rather inferred by the observation of its result, than by any positive knowledge we have of it; this function indeed is in itself inscrutable, so that we can only offer conjectures respecting it."

All the hypotheses which have been imagined to account for the one, have also been applied to explain the other; but the only one in my estimation worthy of being referred to, is the passive imbibition by a kind of spongy substance, in which it is supposed these vessels arise, &c.

\* See Hutin's *Physiology*, p. 61 to 70.



Malpighi considered the ganglia of these vessels to be so many little hearts, or active powers, placed at different distances along the course of these vessels, to excite the circulation of the lymph. They could possess this supposed power if they were hollow sacks, in which the action of endosmose and exosmose could take place, and then we might grant them this appellation of *little hearts*.

With respect to venous absorption, many physiologists deny to the veins this property, and consider them as only taking up, or rather receiving in a passive manner, the remainder of the arterial blood through an uninterrupted continuation of tubes. But an examination of the capillary circulation of a frog, through a microscope, has convinced me that the capillary circulation is not performed in continuous tubes, as generally believed, but in the meshes of the cellular structure, or parenchyma of the organs. Nevertheless, the experiments of Magendie establish beyond doubt venous absorption, and the manner in which he accounts for it, is that it occurs by a *capillary attraction*; but we are no wiser after this explanation. M. FODERA supposes this kind of action to be owing to a species of *imbibition* of the tissues, an idea which seems to me the most probable.

Recently Messrs. RIBES, and LEURET and LASSAIGNE, positively declare having perceived the free orifice of veins on the external surface of the intestines, and still more recently Messrs. FOHMANN, LAUTH, Jr. and LIPPI have discovered numerous communications between the lymphatics and the veins, and by this communication they wish to account for the apparent absorbing power of these latter vessels. We shall only add to the various and very different observations already quoted, that Dr. FLANDRIN has observed absorption to occur through both the venous and lymphatic systems.\*

In venous, as in lymphatic absorption, the difficulty consists in explaining satisfactorily its mechanism, because in both these systems the *absorbent action*, whatever it may be, must be the same, since the same end is attained in both, and both systems act on the same materials.

As closely connected with the subject, I must be permitted to offer a few cursory observations on the secretions.

BLUMENBACH ascribes the absolute cause of most secretions to the intimate *structure* of the secreting organs, and also to the parenchyma, which he thinks is possessed of a "*vita propria*," "a peculiar species of vitality distinct from the *common vital powers* of contractility, irritability, and sensibility." This is to say what is not secretion, but does not explain either the *structure* of the secreting organ, or the action producing secretions; nor are we any wiser after this explanation

\* Journal des Progrès, Vol. VII.

The same may be said almost of all the explanations advanced by different writers; I therefore shall dwell but slightly on them, and proceed to expose some of the views suggested to me by Dr. Dutrochet.

The principal opinions entertained respecting this function may be divided into the *physical, chemical, and vital theories*.

1st. *Physical theories*.—BOERHAAVE, MALPIGHI, HALLER, &c. were of opinion that all humours primitively existed in the blood, and that the vessels diminished gradually in fit proportions to the size of the globules of that fluid. These considerations led them to believe that all secretions were the result of *mechanical filtrations*. Other physiologists compare the secretory *vessels* to a roll of cotton, which, when plunged into a mixture, would only attract the fluid with which the cotton had been previously imbued. Dr. FODERA, from a series of experiments lately performed, was led to consider exhalation as a simple transudation, and absorption as an action of imbibition. He ascribes these two phenomena to the *capillarity* of the tissues, and asks if it were possible to extend this explanation to follicular and glandular secretions.

2d. *Chemical theories*.—The supposed *leaven* of some ancient physiologists is too absurd to require notice.

BERZELIUS, a great name in chemistry, explains secretions by an electric influence. Messrs. PREVOST and DUMAS assert that the secreted fluids are the product of a *galvanic power*, caused by the globules of the blood, which, according to them, represent or stand for so many galvanic plates in a state of action. In this respect the observations of Dr. Fodéra, who has remarked that a stream of electricity excited transudations, favours very much the position of these celebrated experimenters. Still I believe they have fallen into an error in ascribing to the globules of the blood what really belongs to the vesicles or globules of the tissues of the organs.

3d. *Vital theory*.—This theory originated with STAHL, and was supported by BORDEU, by BARTHEZ and BICHAT. It supposes in every secretory organ a kind of digestive action; but we are entirely unacquainted with this *peculiar organic and vital elaboration*; so that we are now just as far removed from a knowledge of the process as ever, and as ignorant of its nature.

A word now on Dr. Dutrochet's views on this subject before giving my experiments.

All the tissues or organs of animals are essentially composed of agglomerated, globular, or vesicular cells. This fact had been partially announced by LEUWENHOEK, and not long ago confirmed by the repeated microscopical observations of one of the most accurate ob-

servers of our age, Dr. MILNE EDWARDS. This great and luminous truth, that all tissues can be solved into globules, as an elementary form is so universal, and these elements or monads are every way so similar, that when observed with the microscope, it is difficult to discriminate parts of the brain from the liver or the tissue composing any other organ. This uniformity of elementary formation of the parenchyma of all the parts of organized bodies, proves that they differ only in the nature of the substances that the vesicular or globular cells contain, and of which the organs are entirely composed; and according to Dr. Dutrochet, it is in these cells or vesicles that secretions occur, and they furnish the fluid proper to each organ, which fluid is probably transmitted by transudation into the excretory canals. Thus we see that according to this author the vesicular structure is the *sine qua non* of all secretory actions. By this vesicular formation of the tissues of our organs, we possess the indispensable and fundamental condition for the production of endosmose and exosmose, into which all the vital actions are to be resolved.

It is well known also, that the fluids of the body are, like the solids, composed of globules, and hence they have in their intimate composition the elements of the solids, and may be considered also *organized*, without much violence to sound philosophy. The only difference is that in the former the globules are free and unconnected, whilst in the latter or the solids, they are adherent and agglomerated; so that the figurative appellation given to the blood by Dr. BROUSSAIS of "*chair coulante*," is no longer a metaphor, but a reality. Hence, if the blood of a person emaciated by sickness and abstinence be examined through the microscope, very few globules will be found; showing that they are always in the same proportion as the state of assimilation.

#### *Experiments—First Series.*

The intestines, cæca, and crops of two fowls killed the previous day, having been cleaned completely, the parts of the intestines being each five inches long, were selected for the following experiments.\*

The substance experimented upon was gum arabic in solution, the proportions being gum arabic  $\bar{\text{z}}\text{j}$ .—water  $\bar{\text{z}}\text{vi}$ .

July 26th, 1828, 6 P. M.—Fahrenheit's thermometer ranged from 78° to 82°.—No. 1. Two of the cæca were less than one-half filled with gum arabic solution, and ligatures firmly applied.

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\* These experiments were performed in a cellar, the temperature above ground being too high.



No. 2. Two crops were also half filled with the same solution, and ligatures firmly applied to prevent any liquid from escaping or entering through their natural openings. Both No. 1 and 2, were plunged into a basin of fresh river water, and permitted to remain all night undisturbed.

No. 3. Two cæca, about four inches long, were filled with simple water, and a ligature firmly applied; they were then immersed in a solution of gum arabic.

No. 4. Three pieces of intestines, perfectly empty, were tied at their extremities, and immersed in water.

July 27th, 8 A. M.—Examined the preceding experiments, and found:—No. 1. The cæca were by this time full, indeed nearly *turgid*. This *endosmose* is even more active than that reported by Dr. Dutrochet. Being rather astonished at this “*turgid state*,” I was induced to examine the ligatures as well as the cæca, fearful of being deceived, but found every part perfectly tight.

No. 2. The two crops were examined, and were nearly as *turgid* as the two cæca placed in the same basin. The water of this basin was renewed.

No. 3. The two cæca were perfectly empty of all their water.

No. 4. The intestines had already introduced a thimbleful of water.

The water in the vessel was renewed.

July 27th, 6 P. M.—Fahr. 80°.—No. 1. Renewed the water in the vessel. The cæca continue *turgid*.

No. 2. The crops are now very *turgid*; one, however, more than the other.

No. 3. Dismissed as very satisfactory, having produced a very perfect instance of *exosmose*.

No. 4. The intestines which were empty, are now more than one-third full. The water in the vessel again renewed.

July 28th, 5 P. M.—Fahr. 77°.—No. 1. The cæca less *turgid*.

No. 2. The crops as *turgid* as ever; indeed rather more so. Renewed the water in the vessel.

No. 4. Rather more *turgid*.

July 29th, 11 A. M.—Fahr. 74°.—No. 1. The cæca have become flaccid, and the water has a putrid smell. Dismissed.

No. 2. The two crops have attained their maximum of *turgidity*, but now begin to become flaccid. I opened them, and both their contents were putrid. The mucous membrane is beautifully detached from the other parts.

*Observations*.—No. 1. Presents us with an example of *endosmose* continuing for nearly sixty hours, and after this period the inverse action or *exosmose* has taken place.

No. 2. We observe in this experiment also, the same action of *endosmose* going on and arriving at an astonishing degree of *turgidity*, and then the opposite action, *exosmose*, to occur.

No. 3. We observe in this experiment a contrary action to happen, that is *exosmose*, the denser liquid being without and the rarer within the organic tissue. This action has been very rapid, even beyond all expectation.

No. 4. This experiment is no less astonishing. This tendency of the surrounding liquid to permeate the tissues and penetrate into an



organ, even when there is no liquid at all, has been an object of speculation with Dr. Dutrochet.\*

### *Experiments—Second Series.*

*July 28th, 4 P. M.*—Fahr. 77°.—I killed a young rat at two o'clock, and the skin being stripped from the animal's back, I put some pure water in it, and closed it up firmly, the skin being in its natural relative situation. When thus filled with water it weighed 500 grs. It was immersed in a solution of gum arabic,  $\bar{3}j$ . water,  $\bar{3}v$ .

*July 29th, 7 P. M.*—Fahr. 74°.—Weighed the rat's skin and contents, and found that it had lost 72 grs. I again replaced it in the same solution.

*July 30th, 7 A. M.*—Fahr. 72°.—Weighed the rat's skin, and found that since last evening it has lost 24 grs. more, which, added to the 72 grs. lost the previous day, make 96, being nearly a fifth of its weight, and one-third of the water which it contained.

*July 31st.*—Fahr. 80°.—The rat's skin smells putrid. It was kept constantly in the same solution, which was wrong, because the mucilaginous qualities of the solution changed much.

*August 1st, A. M.*—Fahr. 80°.—Weighed this morning the rat's skin, and found to weigh 500 grs. The water within being putrid, a partial endosmose has been produced instead of exosmose.

*Observations.*—This experiment shows very forcibly the power of this action, as it occurred through the very thick skin of a rat.

### *Experiments—Third Series.†*

*August 16th, 9 P. M.*—Fahr. 74°.—No. 1. A crop containing gum arabic solution with ligatures applied to its natural orifices, and weighing 500 grs. was put in a vessel full of river water.

No. 2. A cœcum containing gum arabic solution, with its orifice tied, and weighing 154 grs. was put in a separate vessel in pure water.

No. 3. A cœcum containing gum arabic solution, and weighing 105 grs. was also put in water.

No. 4. A cœcum containing water, its orifice firmly tied, and weighing 87 grs. was put in gum arabic solution.

No. 5. A cœcum containing gum arabic solution, and weighing 140 grs. was immersed in water in a separate vessel.

*August 17th, 8 A. M.‡*—Fahr. 74°.—No. 1. Weighs 552 grs. It has increased, in the space of 12 hours, 52 grs.

No. 2. Weighs 269 grs. It has gained 115 grs. in the space of 12 hours, having produced, as well as the preceding experiment, a considerable endosmose.

No. 3. Weighs 157 grs. and has of course augmented 52 grs. in 12 hours.

\* Dr. Samuel Jackson witnessed all the above experiments.

† The object of this series was to repeat some of the preceding experiments.

‡ The water in which the cœca were immersed has been renewed this morning.

No. 4. Weighs 66 grs. There is a loss of 21 grs.

No. 5. Weighs 261 grs. There is an increase of 121 grs.

August 17th, 5 P. M.—Fahr. 75°.—No. 1. Weighs 574 grs. There is still a gain of 24 grs. more in the space of 9 hours. This crop is now very turgid, having taken 44 hours, or thereabouts, to produce this very considerable degree of *turgescence*.

No. 2. Weighs 275 grs. There is an increase of 6 grs. in 9 hours.

No. 3. Weighs 152 grs. having lost 5 grs.

No. 4. Weighs 54 grs. There is a loss of 12 grs. more, and the cœcum is now quite *empty*.

No. 5. Weighs 284 grs. The endosmose still continues, for in the space of 9 hours there has been an increase of 23 grs. and the cœcum is now very *turgid*.

August 18th, 5 P. M.\*—Fahr. 74°.—No. 1. Weighs 714 grs. There is an increase of 140 grs. more, in the space of 24 hours.

No. 2. Weighs 277 grs. There is an augmentation of 2 grs. This cœcum has obtained its maximum of *turgidity*.

No. 3. Weighs 151 grs. There is already exosmose, the endosmose having ceased.

No. 4. This cœcum is now entirely empty. I opened it, and found it perfectly sound, the ligature being very firm. This experiment has established exosmose beyond all matter of doubt.

No. 5. Weighs 299 grs. There is a gain of 15 grs. more. Since the beginning of this experiment this cœcum has increased 159 grs. in about 56 hours, being more than one-half of its whole weight; but the liquid has increased at least three times its original quantity. This experiment is a successful and beautiful illustration of *endosmose*. This organ has now attained its maximum of turgidity, and in this state the organ resists a very considerable pressure of the finger without yielding.

August 19th, 10 A. M.—Fahr. 70°.—No. 1. Still increases in size. It weighs 1020 grs. it having increased 306 grs. in 17 hours; and since the beginning of the experiment it has augmented 520 grs. in the space of 72 hours, being now more than double. It is very *turgid*, and has reached its maximum.

No. 2. Weighs 286 grs. There is still an increase of 9 grs. in 17 hours. However, the endosmose is now nearly spent, and hence I dismiss it. The cœcum is very *turgid*, and endosmose very complete.

No. 3. Endosmose has ceased, and exosmose now begins.

No. 5. Weighs 296 grs. Endosmose has now stopped, and the contrary action, exosmose, is going on. Dismissed.

*Observations*.—No. I. presents a most striking case of endosmose. This action has occurred through the coats of the crop: the mucous, the muscular, and peritoneal coats, which are pretty thick. Had I fixed a tube to one of the orifices of this organ, I have no doubt that endosmose would have continued for some time, and the superfluous

\* The crop and cœca were not weighed in the morning, but the water in the vessels was renewed.

liquid would have ascended in the tube, and issued through its orifice.\*

*Experiments—Fourth Series, with Alkalies and Acids.†*

*August 22d, 1 P. M.*—Fahr. 72°.—No 1. A crop containing some alkaline solution, weighing 426 grs. was put in a separate vessel full of fresh water.

No. 2. A cæcum containing some alkaline solution, and weighing 90 grs. was put in water.

No. 3. A crop containing water, and weighing 463 grs. was put in the alkaline solution.

No. 4. A cæcum containing water, and which weighed 243 grs. was also put in the alkaline solution.

The four following experiments on *acids* were begun at four o'clock on the same day as the preceding.

No. 5. A cæcum containing diluted sulphuric acid, and weighing 148 grs. was immersed in water.

No. 6. A cæcum containing diluted sulphuric acid, weighing 98 grs. was put in water.

No. 7. A cæcum containing water, and weighing 174 grs. was put in diluted sulphuric acid.

No. 8. A cæcum containing water, and weighing 71 grs. was put in diluted sulphuric acid.

*August 22d, 8 P. M.*—I weighed the cæca and crops employed in the preceding experiments, and found them as follows:

No. 1. Weighs 672 grs. being a gain of 246 grs. in seven hours.

No. 2. Weighs 144 grs. An increase of 54 grs. in seven hours.

No. 3. Weighs 488 grs. An increase of 25 grs. in seven hours. In this experiment we observe an endosmose, when we ought to have according to Dr. Dutrochet, an exosmose. I cannot account for this anomaly.

No. 4. Weighs 191 grs. There is a loss of 52 grs. producing an exosmose, and this agrees with Dr. Dutrochet, as do the following.

No. 5. Weighs 121 grs. There is a loss of 27 grs. in four hours.

No. 6. Weighs 84 grs. There is a loss of 14 grs. in four hours.

No. 7. Weighs 186 grs. There is a gain of 12 grs. in four hours.

No. 8. Weighs 82 grs. There is a gain of 11 grs. in four hours.

\* Gum arabic in solution is a very good substance for the production of these physico-organic actions.

I have repeated the above experiments with milk. They tend to prove the same actions as a solution of gum arabic, but its effect is not so rapid as mucilage.

† The solution employed in the following experiments was in the proportion of carbonate of potash,  $\frac{3}{4}$  j., water,  $\frac{3}{4}$  xii. The diluted sulphuric acid used, was when applied to the tongue, very slightly pungent.

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*August 23d*, 9 A. M.—No 1. Weighs 758 grs. There is an increase of 86 grs. in thirteen hours.

No. 2. Weighs 131 grs. There is a loss of 13 grs. in the space of thirteen hours. From an endosmose we have now an exosmose, and hence I dismiss it.

No. 3. Weighs 435 grs. There is a loss of 53 grs. producing an exosmose, as ought to have been the case at first, but I know not to what cause to ascribe this discrepancy.

No. 4. Weighs 173 grs. There is a loss of 18 grs. This experiment has produced a perfect exosmose.

No. 5. Weighs 113 grs. There is a loss of 8 grs. in the space of thirteen hours. We have in this experiment a very beautiful exosmose produced by the acid contained within the organ.

No. 6. Weighs 76 grs. There is a loss of 8 grs. in this case as in the preceding experiment, No. 5, we have an exosmose, caused by the acid contained in the organ.

No. 7. Weighs 162 grs. There is a loss of 24 grs. in thirteen hours. The action was at first endosmose, but now has changed, and will of course continue as it always does. Dismissed.

No. 8. Weighs 77 grs. There is a loss of 5 grs. There was during the first four hours of this experiment an evident endosmose, although weak, produced by the acid.

*August 24th*, 10 A. M.—No 1. Weighs 954 grs. A gain of 196 grs. in thirteen hours. It is now very *turgid*. It has increased, in forty-one hours, 528 grs. of water, which must have permeated the organ; this experiment is satisfactory as to the agency of the alkalies in producing *endosmose*.

No. 3. Weighs 378 grs. being a loss of 57 grs. in thirteen hours, and altogether of 85 grs. in forty-one hours.

No. 4. Weighs 158 grs. a loss of 15 grs. and altogether of 85 grs. in forty-one hours, being about two-thirds of the whole weight of the liquid.

No. 5. Weighs 107 grs. a loss of 5 grs. in thirteen hours, the action is now nearly at an end. There is a loss of 41 grains in forty-one hours.

No. 6. Weighs 71 grs. a loss of 5 grs. The exosmose is nearly exhausted.

*Observations.*—The general conclusion that we may deduce from the preceding experiments is, that when alkalies are contained in a hollow organ, endosmose is produced, when it is an acid, the reverse action, or exosmose occurs; and vice versa, when placed without the organ, the reverse action takes place.\*

#### *Experiments—Fifth Series, on the Acids.*

*August 23d*, 5 P. M.—No. 1. A cæcum containing water and weighing 103 grs. was immersed in diluted sulphuric acid, rather stronger than that used in the preceding experiments.

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\* The effects of acids, it should be observed in producing exosmose, was not quite as striking as Dr. Dutrochet's experiments led us to conclude.



No. 2. A cœcum containing diluted sulphuric acid, and weighing 117 grs. was put in water in a separate vessel.

At 9 P. M. I weighed the above cœca and found them:

No. 1. Weighing 110 grs. an increase of 7 grs. in four hours.

No. 2. Weighs 96 grs. a loss of 21 grs. in four hours. This experiment, as well as the preceding, perfectly agrees with Dr Dutrochet's.

*August 24th, 10 A. M.*—No. 1. Weighs 108, there being a loss of 2 grs. in thirteen hours.

No. 2. Weighs 91 grs. being a loss of 5 grs. in thirteen hours. The exosmose still continues, though feeble.

At 5 P. M. weighed again the above cœca.

No. 1. Weighs 108 grs. No change having occurred in seven hours.

No. 2. Weighs 91 grs. No change has occurred. This appears rather singular, but it must be ascribed to the diluted sulphuric acid being stronger than in the preceding experiments.

*August 25th, 9 A. M.*—No. 1. Weighs 105 grs. The inverse action still continues. This cœcum was emptied, and a small quantity of solution of carbonate of potash put in, and immediately a slight ebullition occurred, indeed even stronger than in the diluted acid in which it had been immersed. This trial proves to conviction that the action of endosmose had caused the acid to pass into the organ through its tissues.

No. 2. Weighs 91 grs. is quite stationary. This cœcum was also emptied and the liquid which remained within was tested with an alkaline solution, but no acid was detected. The water in which the cœcum had been immersed was also put to the same test, but no acid could be detected; the reason must be, because I have changed this water several times, and the acid which issued into it must thus have been gradually removed.

*Observations.*—These experiments evidently confirm the correctness of the preceding ones on the acids.

I have repeated these experiments on the acids and alkalies over and over again, in order not to leave on my mind the least room to doubt that I might be mistaken, and I found that they all confirm each other.

I have also performed some experiments on the sulphas ferri, in order to ascertain the effect or agency of the metallic salts in the production of endosmose and exosmose. I have not yet arrived at any certain conclusion with respect to the experiments performed on this salt. I shall not therefore relate them.

If it be asked, “what utility can your experiments have in medicine?” I shall simply answer, that if they establish a truth, it is in all cases an acquisition, a step forward made in the science of life, even should we now not find any immediate application. How many facts have been found useful in their application in practice, which, at first, were thought to have no immediate usefulness in the healing art? But this is not entirely the case with respect to these experiments, as we shall now attempt to show.

1st. Dr. Dutrochet observed that when the spermatie sacs of the snail, which resemble very much a retort, were immersed in water, this fluid would pass into them through the parietes and accumulate in such a quantity as to expel the sperm with violence, while at the same time the surrounding liquid would occupy the bulb of the retort-like vesicle. This action lasted as long as there was any sperm in them. He therefore concluded that in order to produce this physico-organic action, it was necessary that a fluid of a denser consistence should exist within these hollow organs, for no sooner was the sperm forced out of the organ by this *unknown action* than this current ceased.

2d. He imitated this experiment with the cœca of fowls, and came to this conclusion: that it matters not what may be the size of the hollow organ, or of how many membranes its parietes are composed, or what may be their relative situation with respect to each other. In all these cases the *turgid state* was equally produced, and called by Dr. D. *endosmose*. From this it is necessarily inferred that the indispensable condition for the production of this action was, that the organic parietes be disposed into a cavity, or have a globular or vesicular form, in order that the surrounding liquid should be forced within by this power, *endosmose*.

3d. That by Dr. D.'s experiments, as well as mine, it has been demonstrated that the introduction of the rarer liquid into the hollow organ entirely depends upon the nature of the contained fluid being of a greater density than that in which the organ is immersed.

4th. That as long as this contained liquid maintains its integrity of composition, the *endosmose* occurs; but that as soon as it becomes putrid this action ceases, and a contrary action, called *exosmose*, takes place with great rapidity.

5th. That by inverting the experiments, i. e. when the denser liquid of the two is the surrounding liquid, or is on the outside of the organ, the action is also inverse, and the liquid contained, or the rarer, passes out through the parietes, by the inverse action already called *exosmose*.

6th. That when an alkaline solution is separated from the surrounding fluid, say water, and contained in a hollow organ, there occurs a current which carries the water through the parietes of the said organ and renders it turgid to *excess*, that is, it produces *endosmose*. If, on the contrary, this organ be filled with water and the surrounding liquid be an alkaline solution, then the inverse action, *exosmose*, occurs.

7th. That the preceding deductions are also applicable to the ef-

fects or agency of the diluted *acids*; with this difference, however, that their action is precisely inverse of that of the *alkalies*.\*

8th. We have already established in proposition 3d, that the *denser* fluid induces the rarer liquid to form a current directed towards the former. The consideration of this fact has induced Dr. D. to suppose it, *à priori*, to be caused by electricity; it being well established that a difference in the density of two substances is productive of electricity. Moreover, it is also well ascertained that the electric fluid accelerates the transudation and evaporization of liquids. These facts evidently prove that this fluid does act on the molecules of liquids, and communicates to them *impulsion*.

The galvanic fluid seems to possess even a greater influence on the molecules of liquids; this fact is said to be satisfactorily demonstrated by the curious experiments of Mr. PORRET, published in the “*Annales de Physique et de Chimie*.” I shall briefly relate his experiment.

He separated a vase into two partitions by means of a bladder, and partly filled one of the partitions with water, and into the other introduced a few drops only; he then placed the positive pole in the partition filled with water, and the negative in the other partition. The water passed through the parietes of the bladder, from the partition in which the positive pole was placed into that in which the negative was; that is to say, from the *zinc*, or *less dense*, to the *copper*, or *more dense*, and in this respect following the same law of density as *endosmose* and *exosmose*. Thus these two actions are identified with the two poles of a *galvanic pile* or *electricity*.

This experiment was slightly modified by Dr. D. and was performed with a cœcum, and he obtained the same result. Wherever the negative pole was placed, either within or without the cœcum, there did the fluid flow through the parietes of this viscus.

I have not yet had the opportunity of repeating this experiment, but from the great accuracy of Dr. Dutrochet, I do not doubt that the thing is as he states it.

9th. Another observation seems to confirm this result, and to establish even a greater similitude between *endosmose* and *electricity*.

We see in propositions 6th and 7th that an alkaline solution is productive of an *endosmose*, when introduced into a hollow organ; but if an acid be placed therein, then an *exosmose* is caused. Now, if a salt with an alkaline base be submitted to the action of a galvanic pile, the salt is decomposed, and the alkali is transmitted to the ne-

\* These chemical agents were always used so weak or diluted as never to induce any alteration in the organic membranes employed in these experiments.

gative pole and the acid to the positive. But we already know that it is towards the negative pole that the current is directed, and that a similar current is also produced by alkalies; and hence the reason they both produce *endosmose*, and why the positive pole and the acids cause the same effect, *exosmose*.

Thus we do not only see the similarity, but even the identity of action of *endosmose* and the poles of a galvanic pile, and that the impulse given to the liquid is owing to an electric current directed from the positive pole, (*zinc*, or *acid*, or *less dense*,) towards the negative, (*copper*, or *alkali*, or *more dense*,) and finally, it is to this action that the accumulation of liquids in a hollow organ is owing, and soon producing and constituting the *turgid state*. Thus *endosmose* and *exosmose* entirely depend upon electricity.

10th. Dr. D. compares the hollow organs which present either of these vital phenomena to Leyden jars, with permeable parietes, their interior being occupied by an electricity in an opposite state to that existing on their exterior, and that since the current of the liquid is always directed to the side negatively electrified, it follows that whenever the interior of these *small Leyden jars* are negatively electrified, *endosmose* occurs; their exterior, however, being positively electrified; and if these states of electricity be reversed, we shall have *exosmose*.

I have already remarked that the tissues may be resolved into *vesicles* or *globules*, and that they are in fact made up of an agglomeration of these vesicles. Now every one of these vesicles, in their natural state, are filled with a liquid denser than the surrounding water, they consequently produce *endosmose*; and they therefore act as so many *Leyden jars*, negatively electrified within, and positively without.

It results from this view of the subject, that the cœcum or crop of a fowl, made perfectly air-tight by ligatures, may be considered a hollow organ, the parietes of which are composed of an infinity of these *Leyden jars*, their interior being negative, and their exterior positive. But according to the laws of electricity, the cœcum or crop may itself be considered as a larger Leyden jar, being in the same state of electricity. Dr. D. farther suggests that if a hollow sphere could be constructed with small agglomerated Leyden jars of glass, being all positive externally, and negative internally; this sphere would itself be a Leyden jar of the same kind. This explains beautifully why an empty cœcum placed in water, permits that fluid to permeate and distend it, and thus produce a slight *endosmose*; and this action most satisfactorily explains the two cases of sudden dropsy,



mentioned by Dr. CHAPMAN in his clinical lectures; the one a gentleman from Boston, the other from Virginia. Both became dropsical immediately after coming out of a bath; they had previously taken violent exercise; one of them took the warm, the other the cold bath; but the same result happened in both. They were at this time, to all intents and purposes, in the state of a Leyden jar, negative within, and positive without; hence the endosmose, and their dropsy. The same may be said of a swollen drowned body, which has also been made *turgid* by the action of endosmose. My experiment on the skin of a rat, to a certain extent, tends to prove the same position, although it was an exosmose.

11th. That when a cœcum containing a denser liquid is placed in a fluid less dense, this latter passes within that viscus; but there exists at the same time a feebler current from within outwards. This fact is particularly exemplified and demonstrated in one of my experiments on the sulphate of iron, in which the water surrounding the cœcum contained some iron that evidently had oozed out by this feebler action, exosmose, while the cœcum continued to become more and more turgid.

12th. Thus it is demonstrated that there exists simultaneously two currents, endosmose and exosmose, both going on at the same time. Then, when we say that a substance produces endosmose, whenever put into a hollow organ, we mean to say that there exists a weaker current from within outwards, besides the one producing endosmose; so that endosmose and exosmose both exist at the same moment in the same organ, or rather in the vesicles composing each organ. To this simultaneous double action we may ascribe, in organized beings, the movements of *composition* and *decomposition*, or *nutrition*; *interstitial absorption* and *serous exhalation*, and *external absorption*; *cutaneous absorption* and exhalation; the irrigation of the secretory organs by the blood, and the respective secretions of these organs, which secretions occur in each vesicle that constitutes *chemical filters*; in a word, all these functions are the result of this double movement or action, *endosmose* and *exosmose*.

It is ascertained that electricity produced by the contact of two heterogeneous substances, gives rise to two electric currents passing in opposite directions. In the preceding experiments we have seen that two heterogeneous liquids nearly in contact, that is, simply separated by an organic membrane, produce also an electricity which is manifested by two opposite currents. A most important fact for the experimental philosopher, resulting from these experiments, is,

the difference of force always attending these electric and opposite currents.

13th. That many of the substances which are daily used as articles of food, such as milk, the albumen, as well as the yolk of eggs, solutions of gelatine, gum-water, water sweetened with sugar, and most extractive principles of vegetables, and even opium, produce *endosmose*. Alcohol at  $36^{\circ}$  is one of the most powerful agents of *endosmose*; but when largely diluted with water, on the contrary, it produces *exosmose*. Now, this perfectly agrees with every days observation and experience. We know that alcohol very much diluted, or given in any preparation into which this article enters in small quantity with water, is an excellent diaphoretic or diuretic, according as it may act, or rather according to the degree of temperature, whilst the immoderate use of ardent spirit, as is often practiced by labouring men in this country, produces inflammations or congestions, or extravasations, or effusions in the brain, lungs, spleen, liver, &c. The former mode of administration producing *exosmose* or diaphoresis; the latter mode, *endosmose* or congestion; hence the absurdity of the administration of alcohol in immoderate quantity whenever there exists already a congestion, as in typhus or typhoid diseases; and again, we are now able to account why diluted vegetable acids of every description are very beneficial in diarrhœa, and in fevers in which the gastro-intestinal canal is primitively affected, and in which the lesion and the fever, its symptom, are to be located.

Dr. Chapman speaks in a very commendatory manner in his lectures, of the use of acids in some very stubborn cases of diarrhœa. The reason why vegetable acids are useful in these affections is because they produce *exosmose*.

14th. That a higher temperature augments the intensity of the *endosmose*; hence, my first series of experiments being performed when the thermometer was much higher than at any time when Dr. Dutrochet performed his, the *endosmose* in mine was proportionately more active. I may also have used my gum arabic solution rather stronger than Dr. D. which would also cause a more intense *endosmose*. This fact perfectly agrees with the experiments of M. BECQUEREL, in which he has proved the elevation of the temperature increased the intensity of the electric current.

One more fact may be adduced in addition to those already cited, in order to prove that *endosmose* is owing to electricity. When a cœcum is almost filled with the albumen of eggs, and immersed in water, it introduces this liquid into this viscus, and causes it to be-

come turgid. But on opening the cœcum a few hours afterwards, the internal surface is found lined with a pseudo-membrane composed of coagulated albumen. Now, it is well known that the coagulation of albumen is one of the effects produced by the current of a voltaic battery.

15th. It has been proved by the experiments of Dr. Dutrochet, that the *life of nutrition* of vegetables consists entirely in a movement or action of endosmose and exosmose; but these physico-organic actions acknowledge for their principal cause, electricity; consequently, this agent or power is the principle of the life of nutrition of vegetables. That absorption, exhalation, and secretions, constituting in fact the nutrition and *life* of the vegetable, are all performed through the agency of this principle.

It is pretty generally known, that the justly celebrated Bichat, from a mature consideration of all organized bodies, came to the conclusion that the functions of life may be divided into two classes: the first he called *animal life*, or *functions of relation*; the second, *organic life*, or *functions of nutrition*, or *vegetable life*. This division is thought by many not rigorously exact. It has been especially criticised by Buisson, but not on a just foundation, and by Magendie in several notes of his edition of Bichat's work, "Sur la vie et la mort." Although we agree, to a certain extent, with the views of Magendie, that this division is "more brilliant than solid" in its details, and when we minutely compare all animated beings, it is difficult to say where *animal* life terminates, and *vegetable* life begins, still we cannot help admiring the vast genius of Bichat in this generalisation. His division is sufficiently exact for our purpose, which is to show that the functions of nutrition in man are performed precisely by the same laws as the functions of nutrition in vegetables. But these laws in vegetables are *endosmose* and *exosmose* or *electricity*. We conclude, from the similarity of these functions in *vegetables* and *animals*, that they are in the latter also induced by the same principles; with this difference, however, that in the apparatus of *nutrition* of vegetables no nervous system has ever been positively demonstrated, while in the apparatus of nutrition of animals we observe a system of nerves peculiar to it, I mean the sympathetic or ganglionic system of nerves.

This system, in the higher orders of animals, unites every organ in close relation and sympathy, and has a superintendence over all the functions and vital actions of the organs.

16th. We have already remarked, that every tissue is formed by



the agglomeration of vesicular bodies, containing substances sometimes liquid, at others viscous and tenacious, and again solid, according to the different tissues into the composition of which these vesicles enter; they are irrigated on all sides by blood flowing in infinitely small vessels, and it is by a kind of infiltration that the blood penetrates into these vesicles, (the seat, as it will be demonstrated, of all functions,) and is therein modified. This vesicular state of the tissues in animals, as well as vegetables, is the indispensable condition of endosmose and exosmose, and we shall see, that they are really possessed of this physico-organic action.

The morbid state of the solids, called inflammation, is a condition familiar to every one. It is, also, well known, that the soft parts in this state become turgid, and that the fluids, either remote, or immediately surrounding, are, by an *unknown cause*, drawn, in great quantity, to the affected part.

Here we are struck with the similarity of this phenomenon with endosmose; the effects of which, as we know, are manifested by the *turgid state*, and produced by a movement of *adfluction*.

The arteries going to a part, thus circumstanced, augment in caliber, in order to conduct, and pour more blood into the tissues of the inflamed part. The veins which come from this part are dilated by the impulsion given to the blood, that this part, at this time, expels in greater abundance, and with more force. We have, then, two forces, the one drawing the fluids to the affected part—or *adfluction*; the other, expelling them with greater force than in the normal state—or *impulsion*. There is no doubt in my mind, that inflammation is a phenomenon of endosmose.

This same phenomenon exists also in a normal state, but in a smaller degree of intensity. It is by this *adfluction* that blood is drawn into the minute capillaries, and it is to this same phenomenon of adfluction, that is owing, the emptying of the arteries after death, when the heart has ceased to contract, and its impulsion, or *vis à tergo*, is at an end; and then the blood is found accumulated in the veins. This proves that the action of the heart ceases before the vitality of the tissues, (or rather of the component vesicles,) disappears, and explains the progression of the blood in the veins.

It would also seem from this, that the supposed contraction of the capillaries does not exist; though I do not pretend to assert, that there are not several other causes which favour the progression of the venous blood; but I cannot agree, for instance, with Dr. Barry, that it is entirely owing to atmospheric pressure, and to the dilatation of



the chest in respiration. To conclude, circulation is a phenomenon, having several causes for its accomplishment, namely, the contraction of the heart, and the endosmose occurring in the vesicles, by which the capillaries are surrounded, and which endosmose acts on the principle of a *sucking and forcing pump*, &c. &c. This action of endosmose in the capillaries, and causing the capillary circulation, is described by some French physiologists, as “a kind of *vital aspiration* or *suction*, which draws the blood into the parenchyma of the organs.”

17th. The same reasoning holds good, and is applicable to the progressive movement of the fluids contained in the chyloferous and lymphatic vessels. The lymphatic ganglia, which are every where dispersed on the route of these vessels, might be supposed, by a superficial observer, to hinder the progression of these fluids; on the contrary, far from retarding their progress, they are placed here by nature, to favour, facilitate, and perform this great function; and this is again accomplished by *endosmose*.

18th. Thus endosmose exists in a normal state in the organs of animals, of course inflammation is the *exaggeration* or *exaltation* of this physico-organic action, and has been called by Dr. D. an *hyper-endosmose*. *Erectile turgidity* is owing to the same cause, with this difference, that it happens as a normal action, modified by nervous influence; but which normal action, if it were too often repeated, would become permanent, and produce a congestion.

My observations have already extended to so great a length, that the practical application of this physico-organic action must remain for the present, at least, untouched by me; and I must refer my readers to the last thirty pages of Dr. Dutrochet's work, in which they will find some of the most valuable practical hints on the nature and cure of inflammation, on the *modus operandi* of medicines and dietetic substances, on the action of general and local blood-letting, &c. These thirty pages are pregnant with many truths, and they ought to be studied by every *medical man*.

*Philadelphia, March, 1829.*

ART. VIII. *On the Seat and Treatment of Erysipelas.* By ALEXANDER SOMERVAIL, M. D. of Essex County, Virginia.

IN the Biolographical Notices of this Journal for November, 1828, there is one, entitled Observations on the Nature and Treatment of Erysipelas, by WILLIAM LAWRENCE, Esq. F. R. S. &c. In one part of his treatment, he says, "the most powerful means of arresting the complaint, is by making incisions through the inflamed skin, and the subjacent adipose and cellular textures." This brought to remembrance a similar proposition I made, in the close of the life of the late WILLIAM BAYNHAM, Surgeon, as recorded in the Philadelphia Journal of the Medical and Physical Sciences, for August, 1822. I there state the probability, that scarifications through the superficial vascular membrane, discovered by Mr. Baynham in 1779, would arrest the progress of erysipelas.

Though I have never tried scarifications, yet the belief of the disease being seated in this membrane, has influenced my management of those cases I have met with since, and I think with some advantage. Soon after the inflammation appears it spreads in one direction: in the face it often begins in a perpendicular line from the forehead, along the ridge of the nose to the chin: sometimes it moves towards the ear, and sometimes in the opposite direction. My intention has been to apply before the moving edge of the inflammation, something to alter the state of the yet uninflamed membrane, and prevent the accumulation of blood in its vessels, and excite the absorption of that already accumulated.

In the first case that occurred, opodeldoc was applied before I saw the patient, with relief. I directed it in the next case that I saw all round the edges with success. In the summer of 1828, I met with a case in a poor emaciated woman, occasioned first from an extensive caries of part of both parietal bones, and the upper part of the occipital and frontal bones; then severe dysentery, and this followed by general anasarca and ascites, producing great emaciation and debility. Soon after these were removed, with every appearance of returning health, she was attacked with pain in one shoulder and neck, which she thought was swelled, and believed to be rheumatism, which she was often affected with; at the time she was unable to show the part affected, and I left a solution of pearl ashes and laudanum, to be applied when she got help. On returning the second day, the affection had spread all over the back, and was evidently erysipelas. I directed the mixture to be applied along the edges of the inflammation, but

for want of assistance it was very partially done, yet with relief when applied. Some weeks after this it began again in the middle of the face, and was moving towards the ear; I directed the mixture before the moving edge, and the disease was arrested at once. Another case occurred in a man in good health; it spread all over the body, thighs, and arms; the mixture here gave great relief, and by the help of powerful purgatives the disease was removed; it returned, however, about two weeks afterwards, and was relieved as before.

The preceding and attending fever is much increased and kept up by the pain of the inflammation; when the pain is mitigated, the fever diminishes, and when the pain is removed, the fever soon gives way. Mercurial ointment, and even oil, are said to mitigate the sufferings in this disease also. The fever always requires suitable remedies besides local applications, and no doubt in some, deep scarifications may be required, but no case of suppuration has fallen in my way for a long time. I have seen one well marked case in a negro.

Since reading the notice of the method of cure by scarifications in the American Journal, I have found a copy of a letter from Mr. Baynham to his friend, Dr. COLLIGNON, of Cambridge, containing a description of some preparations of the skin, to show this membrane, sent to him from London. This is dated May, 1779, the date together with some interlineations, written with his left hand, which he learned to use, in consequence of a hurt of his right arm, received in 1806. Of a part of this letter the following is a copy.

“Nos. 10 and 11. Two portions of the common integuments of the leg, prepared to demonstrate the rete mucosum to be a vascular membrane, and not, as has been generally supposed, a mere deposition of mucus.

No. 10, is a piece preserved wet, with different sections through the cuticle and rete mucosum, two portions of which are peeled off from the cutis, and hang down towards the lower part of the preparation. The first section to the right hand as you look towards the glass, is the cuticle and rete mucosum adhering to each other: a part of the cutis above, answering to the size of this, being exposed, and appearing of a whitish colour, with small granulated spots interspersed at regular distances throughout its substance. These specks I apprehend, are what are commonly meant by the miliary glands; or at least if they are not, it is my belief that each is a proper apparatus, designed for some secretion or other, though I will not take upon me to say what. In each of these the root of a hair lies buried, so that probably it is from thence the hair derives its nourishment; but besides this there are to every one of them, one, two, and sometimes three



processes of the cuticle. I call them processes of the cuticle, because I have no better name to give them, but they may be the excretory ducts of these above-mentioned glandular spots, for aught I know to the contrary, as they plunge immediately into them through the rete mucosum, in which you will please to observe there are distinct and regular foraminæ, answering to these processes, and which are no doubt occasioned by their passing through it from their origin, (if they are excretory tubes,) to get to the surface of the body, or vice versa, if considered merely as internal productions of the cuticle. The structure of these granulated appearances I have been speaking of seems to be simply vascular, appearing to be convoluted vessels, when prepared for and viewed with a proper glass.

The second piece of No. 10 is cuticle only, separated from the rete mucosum, the external surface of which is seen above, with a fine red blush upon it, and having a piece of blue paper insinuated between it and the true skin, in order to show it to greater advantage. In it are observable the foraminæ I have just mentioned, and upon the cuticle below may be seen those processes answering to them, standing forth from the surface about a straw's breadth in length, smaller at the points than at their attachment to the cuticle, which may be called their base. When viewed with a common magnifier, the vessels upon this wet portion of the rete mucosum may be distinctly seen; but to make them still more apparent, the piece No. 11 was prepared in the manner following:—

The cuticle and rete mucosum, while the parts were yet wet, were separated from the cutis, but left attached to each other; then the parts were pinned out to dry, and the preparation afterwards put into spirit of turpentine. Here I might observe that the separation of the rete mucosum from the true skin, was always much easier done than between it and the cuticle, which was not effected without a good deal of care and attention. The lowermost thick part of this preparation is composed of cutis, cellular membrane, &c. from which was stripped the thin portion above, by which it is suspended, and which consists of rete mucosum and cuticle together, the drying having destroyed all distinction between them, and makes them appear to be only one membrane, and from their thinness and transparency one would be led to believe that to be really the case: both membranes have however been adhering to one another, and dried in that state; the cuticle being next to the paper, and the red vascular appearance which is immediately exposed to view, is the internal surface of the rete mucosum, which in its natural situation, lies in contact with, and is connected to the true skin by its proper vessels, the order of whose



ramification is *parallel* to the surface of the skin, and forms a most regular and *beautiful reticular* appearance, when viewed with a common magnifying glass. From this mode of distribution it is evident, I think, that they are not perspiratory vessels, unless we admit the doctrine of transudation, and say the insensible perspiration is thrown off through their coats, which seems very improbable. It is extremely difficult to say from whence the vessels of the rete mucosum spring: they are most likely twigs sent off from some of the numerous cutaneous arteries and veins, which must be necessarily broken in destroying the connexion between the two coverings. The circumstance of my having injected that part of the animal machine which had heretofore been considered as inorganic, has made some little noise among the medical people here, some of whom have done me the honour of calling to satisfy their curiosity, by getting a sight of the preparations. Amongst the learned of these gentlemen, were Messrs. J. HUNTER and CRUIKSHANKS, Drs. JEBB and MECKEL, and some others; all of whom *appeared* to be convinced, and made me compliments &c. on the occasion."

In answer to this, Dr. Collignon writes from Cambridge, 16th of May, 1779.

"And now my good friend, give me leave to thank you for a most invaluable addition to my preparations, and which I assure you I prize highly, for your, as well as for their own sake. They have but one fault; they are too elegant and cast a shade over those I possessed before. I have no difficulty in agreeing to your determination about the rete mucosum, and I am satisfied you make me see it with my eyes; but I assure you the testimony of John Hunter and other veteran injectors is far preferable to mine."

In Mr. Baynham's remarks on the margin of his copy of Cruikshanks on the Absorbents, he calls this his membrane, in contradistinction to Cruikshanks', representing it, as I have done, in the account of his life, in the Philadelphia Journal.

*Essex County, Virginia, Jan. 1829.*

ART. IX. *Case of Epilepsy, successfully treated by the Operation of Trepanning.* By JAMES GUILD, M. D. of Tuscaloosa, Alabama.

THE subject of this case is Captain Stephen Elliott, a respectable citizen of this place, aged forty years, who had enjoyed perfect good health until August, 1827, at which time he was suddenly attacked with an alarming epileptic convulsion, which threatened immediate dissolution. Medical aid was speedily procured; a large quantity of blood being extracted, he was soon resuscitated, but remained in a comatose state a considerable time. His health from that time gradually declined, and he was the subject of epilepsy every one, two, or three weeks, as the exciting causes acted with more or less intensity. Great languor and lassitude succeeded, with an entire derangement of the healthy functions of the system, attended with an excruciating pain of the left side of the head; and an entire loss of the sight of the left eye, which produced intolerable anguish so long as he was the subject of epilepsy.

I was of the opinion, as well as other medical attendants who saw him, that his complaint originated from a deranged state of the stomach and bowels, as there was considerable torpor of the alimentary canal; consequently, cathartics were administered to a considerable extent, accompanied with repeated copious blood-letting, with little or no benefit, with the exception of lessening the excitability of the system, thereby relieving the urgent symptoms for the time being. He was then put on a course of calomel for the purpose of producing ptyalism; that object being accomplished without the least amendment, we came to the conclusion that there was no other alternative but operating with the trephine, as the epileptic convulsions became more frequent, and such rapid destruction of his general health, that his life was despaired of. Accordingly, on the 10th of October, 1828, being fifteen months from the first occurrence of the convulsions, assisted by several medical gentlemen, a circular piece of bone was taken out immediately from that part of the head where the pain was most acute, being on the left side of the os frontis, one-eighth of an inch from the coronal suture.

The bone was considerably diseased, rather of a carious and spongy nature, and somewhat thickened; as the trephine was going through the bone, the pain was so insufferable that we had to desist every one or two turnings of the instrument to prevent excessive nervous tremors.

On the instrument's entering the diploe, the hæmorrhage was so

considerable as to produce alarm, inordinate hæmorrhage from such a quarter being quite a novel occurrence; in a few minutes, however, the discharge of blood ceased, and there ensued a discharge of serum, which continued until suppuration took place. As soon as that effect was produced, a better state of things was observed; the health of the patient gradually improved; no recurrence of the convulsions; pain in the head disappearing. In thirty days the wound cicatrized, and he was discharged entirely cured, and now enjoys good health.

There was no unnatural appearance of the dura mater, and the brain pulsated with the usual vigour, as in health.

It will be perceived from the short and cursory detail given of the present case, that the cranium was the seat of disease, being thickened, thereby producing morbid irritation and congestion, and epilepsy.

It cannot be thought for a moment that the subject of this case was relieved so much from merely taking away with the trephine the small piece of bone, as from the suppuration that ensued as a natural consequence; as a greater portion of the left side of the head was in a state of disease, even extending into the superior maxillary jaw bone. I feel warranted in saying that the diseases arising originally from the functions of the brain and its appurtenances have never received that attention which their importance demands.

It has been, and is still the opinion of the medical world, that the trephine should never be resorted to in any case whatever, except where there is actually a depression of the cranium; but this gentleman having never received a blow, or sustained any injury on that part of the head where the operation was performed, it follows that there are cases in which the trephine may be resorted to with success, other than those of depression of bone from violence; and I would not be much surprised if the trephine should hereafter be resorted to successfully in cases of lunacy, epilepsy, and a great many other affections of the head, that are suffered to linger out a loathsome and miserable existence.

*Note.*—Some interesting cases of epilepsy cured by the use of the trephine, are related by Professor Dudley, in the *Transylvania Journal*, Vol. I. See also this *Journal*, Vol. II. p. 489.—ED.

ART. X. *Remarks on a Cutaneous Affection, produced by certain Poisonous Vegetables.* By R. DAKIN, M. D. of Columbus, N. J.

SOME apology is, perhaps, necessary for offering the following remarks to the profession; but I do not recollect ever having seen a treatise upon the subject; and if authors on cutaneous affections have mentioned it, it is those to whose works others, perhaps like myself, have not had access. Judging, however, from the remedial means generally resorted to, and which, according to my observation, rarely facilitates the cure, I am forced to believe, that this disagreeable affection has not received a due share of attention, probably from its seldom occurring in cities, and coming within the observation of medical writers.

It is known among country people by the title of poison. The hands, feet, legs, face, and organs of generation, are the parts most usually affected. It is contracted by touching certain plants and shrubs, and not improbably, sometimes by inhaling, or swallowing with the saliva, the odour arising from them. Many suppose that breathing the smoke of the poisonous plants produces the disease.

The shrubs most virulent are the poison oak, (*Rhus toxicodendron*,) and the poison ivy. The poison oak, or sumach, grows in marshy lands, from three to seven or eight feet in height, with a smooth stem, the branches projecting almost horizontally from near the top. A milky juice exudes from a fresh cut or broken branch.

The ivy is a vine common I believe to most parts of the United States, growing luxuriantly in both low and high lands, running up stumps and trees, and attaching itself firmly to their bodies by innumerable fibrous roots. Many branches proceed from the body of the vine containing stems three or four inches in length, with three leaves of an oblong shape and glossy green appearance on each. I once saw a boy, who was doubtful respecting the poisonous properties of this vine, rub several leaves on the back of his forearm. The burning eruption in a day or two produced a painful conviction, which dispelled his doubts.

Some good meaning, mystical, marvellous physicians, or favoured ladies with knowledge inherent, say the bane will prove the best antidote, and hence advise the forbidden leaves to be eaten, both as a preventive and cure to the external disease. I have known the experiment tried, which resulted in an eruption, swelling, redness, and intolerable itching, around the verge of the anus. I was lately



applied to by a mower, who was very much alarmed at the condition of his anus, which was very much swollen: an examination immediately satisfied me that it was nothing but poison. I directed cooling laxatives for two or three days, gave him a box of ointment to counteract the inflammation, and I heard no more of the case.

After exposure, the eruption appears in from one to three days. The most prominent symptoms are, a slight itching and redness, followed by burning sensations, which soon become almost excruciating. The eruption, in most instances, is vesicular, about the size of a millet seed, and containing a transparent, thin, watery fluid, and so close together as to present a confluent mass. As the disease progresses, the contents of the vesicles become yellow, and finally, in severe cases, pus, of the consistence and colour of cream, is discharged, and the sores then soon heal. If rubbing or scratching be indulged in, which it is almost impossible to avoid, the eruption spreads wherever the cuticle is abraded. The fluid will sometimes ooze from the vesicles, and run to some distance, the course of which will be marked by a red streak, and all the symptoms common to the malady will follow. It is not dangerous, though very troublesome. If it be entrusted to poultices, lead water, cream, solution of galls, or mild soothing unguents, or lotions, or even to nature, it will generally terminate in from five to ten days.

The treatment which I have in every instance found successful, consists in blood-letting, cooling laxatives of neutral salts, and the following unguent as a local application:—R. Cupri sulph. ʒi.; Precip. mer. rub. ʒi.; Tereb. ven. ʒiij.; Axung. porc. ʒi.—M. ft. ungt.

On the slightest admonition that the disease is contracted, I abrade the cuticle, or open the pimples, and apply a small quantity of the ointment, which occasions a slight smarting, but agreeable, compared with the tormenting sensations attendant on the affection. One or two applications with about twelve hours intervening between them, will arrest the inflammation, and in three or four days all marks of disease is generally obliterated. Venesection is rarely necessary, except the eyes, scrotum, or some important organ be concerned. The above ointment is most efficient in arresting the progress of the complaint if applied the day of its appearance; and though neglected for two, three, or four days, will generally give prompt relief.

The affected parts should be kept cool, and the patient be ordered not to handle his body, without first washing his hands, after touching the sores, as he might thus unconsciously inoculate other parts.

Why some possess a constitutional immunity from this disease, is a question that I believe has not been satisfactorily solved. Children

are susceptible whose parents never were poisoned. Many rub themselves with the baneful leaves without the slightest injury. Mulattoes and negroes, light and dark complexions, appear equally susceptible. This susceptibility recedes as age advances. By simple contact with the vine or bush, we do not always contract the disease; but boys subject to it, who run through meadows, get their feet scratched, and then touch the vine, generally pay dearly for their temerity.

I should be pleased to have the question solved, why some handle with impunity what will so soon severely punish others. Can it be possible, that some peculiar structure of the cuticle, or rete mucosum, constitutes this idiosyncrasy? I have sometimes thought that children, in the maximum of animal life, were more obnoxious to the poison than those of lower rank in the vital scale. I do not recollect of ever having seen a pale looking person poisoned, at the same time, however, many vigorous habits are not susceptible.

I have just learned that Dr. HOBSON of New York, some time since, published a small work on this subject, and that it is his opinion, that the disease is seated in the rete mucosum. With this view I coincide, for were the skin the seat, and the mucous surfaces only different, by being so alive to impressions, so quick in their organic perceptibility, the great extent of their sympathies, &c. we should often have it in the form of pneumonic, gastric, or enteritic inflammation. I have seen the eruption spread to the corners of the mouth, but no farther, not even within the verge of the epithelium.

ART. XI. *On Hydrorachitis, with Cases.* By SOLOMON TEMPLE,  
M. D. of Philadelphia.

**HYDRORACHITIS**, though not a very common disease, is of sufficient importance to claim attention. It is a dropsy within the spinal canal, and is usually congenital; commencing, in all probability, in the first months of uterine life. At birth it is characterized, in most instances, by a livid spot seated upon some portion of the spinal column, and most frequently in the lumbar region or on the sacrum. This spot very soon becomes elevated, and conveys to the touch an evident sense of fluctuation. The tumour either ruptures at this period and discharges a fluid, usually transparent and resembling serum, but sometimes thick, flocculent, and turbid; or it increases gradually and sometimes attains an enormous bulk. On some occasions the tu-

mour is ruptured during parturition, and cases have occurred wherein no tumour existed, or if it had ever formed must have ruptured a long time previous to birth. When the tumour has remained entire for some days after birth, the integuments, yielding to the pressure of the fluid within, often become thin, and sometimes translucent, exhibiting the sub-cutaneous vessels minutely and beautifully injected. In some instances the skin retains its natural thickness, and in others it is rugose and thicker than usual. Most frequently there is a defective ossification in the vertebræ subjacent to the tumour, but it generally consists in the absence of one or more of the spinous processes, the remainder of the bones being perfect. In some rare instances, the transverse processes and bony bridges are wanting, and still more rarely the bodies themselves. OKES, in his account of spina bifida, alludes to cases wherein there was no deficiency of bone.

These are the characters usually presented by this species of dropsy. It is often connected with hydrocephalus, probably nearly always where it continues any length of time. Sometimes there is paralysis or distortion of the lower extremities, attended by constipation or diarrhœa, and strangury or ischuria, or there is an involuntary discharge both of fæces and urine. Some patients are extremely debilitated, others on the contrary are healthy and vigorous, and in a few cases remarkably lively and active, as I have witnessed in one instance. Few subjects of this disease survive many months; of the two which I have seen, one lived eight and the other four months. Instances are, however, recorded of patients living several years, and even to adult age.

The essential characteristic of this species of dropsy, is its connection with the cavity of the spine; and where it appears as an external tumour, there is always a direct communication with this cavity. When entirely confined to the spinal cavity, I know no means of determining its presence with certainty: the occurrence of the symptoms mentioned above may induce us to suspect its existence, particularly if they are combined with hydrocephalus or club-foot.

Although this is properly considered as a congenital disease, yet instances are related wherein it did not occur until a few days after birth. LANCISI asserts that he once saw a case, in a child with hydrocephalus, in which the disease did not appear before it was five years old; and J. LOUIS ALPIN, that he witnessed a case in which the tumour did not make its appearance until the age of twenty years, but these are exceptions of no practical importance; in all probability the last two arose from hydrocephalus or from accidental injury.

The speculations of most authors upon hydrorachitis are based upon



an erroneous pathology of the disease, and their writings are only valuable for the facts which they contain. It is a circumstance somewhat singular, that a disease which must in all probability have existed in the earliest ages, did not apparently engage much attention until a period comparatively very recent. Little notice appears to have been taken of the disease previous to the time of TULPIUS, who gave some description of it; but neither did he, nor any author of that period do more than call the attention of surgeons to the subject.

RUYSCH, whose rigid analytical inquiries have enriched various departments of medical science, seems to be the first who apprehended the real nature of the disease. He called it a dropsy of the medulla spinalis, and was, I have no doubt, led to this conclusion from inspecting the kind of lesion which attended it, and the qualities of the effused fluids. He says, "If we examine this swelling judiciously, it will appear as clear as day that it is a dropsy of a part of the spinal marrow, and is almost the same disorder which, when it is seated in the head of an infant, is called hydrocephalus."\* The investigations of this distinguished anatomist were made about the close of the seventeenth century, and afforded a clue to the correct pathology of the disease, but I am not aware that it was ever fully pursued. Subsequent writers have viewed it as the consequence of a lesion of some part of the bony structure forming the vertebral canal, and have contributed to perpetuate the use of the term by which it has been erroneously designated, and which alone is intelligible to most medical men at the present day. It has rarely been suggested that the deficiency of bone may have been a consequence rather than a cause of the disease. Dr. UNDERWOOD was aware of the importance of Ruysch's observations, and mentions, rather hesitatingly, the real cause. I shall endeavour to show that the disease is coeval with, or anterior to, the formation of bone in the fœtus, and probably anterior to the cartilaginous form which bones assume, intermediate between their gelatinous condition and the deposit of bony matter. I shall, for the present, confine myself to that variety of the disease which manifests itself by a tumour at the lower portion of the vertebral column, as I have had no opportunity of examining others, and the dissections heretofore made are not sufficiently minute to warrant deductions from them. In these cases there was probably a displacement of the lower portion of the medulla from a distention of its membranes, which must have occurred while the parts were yet soft and yielding. In the natural state this portion projects into that part of the

\* Van Swieten's Commentaries, Vol. XII. page 249.



gelatinous mass which represents the sacrum, but in this disease it bursts through the substance in which it was enveloped, and which was to constitute the rudiment of the bony case designed to cover and protect it. As the process of ossification advances no channel or canal is left for its accommodation in the sacrum, which its presence in that portion would have secured, and it is therefore finally excluded. One reason for supposing the disease to originate anteriorly to the formation of bone, is that the foramina in the sacrum are perfect, in their proper places, and actually occupied by the nerves, although these come from the inferior portion of the hydrorachitic sac, which could not have happened if the lower portion of the medulla had been recently protruded through the opening in the spine.

Even if the distention were not sufficient to rupture the envelopes of the spinal marrow, its chief force would be directed towards the posterior or least resisting part, and by its pressure as effectually prevent the ossific process. Extending this view to other portions of the spine, and comparing it with the effects of serous effusion within the cranium, its ready application to every variety of hydrorachitis is obvious. But whatever may be the period at which this deficiency of bone occurred, we have every reason to believe that it is subsequent to, and caused by, the hydropic effusion. For in the cases recorded, we have no evidence either from the symptoms, or from post mortem examination, that any cause for this deficiency existed primarily in the part: and, from analogy, we are warranted in concluding, that the presence of a foreign body hinders the natural process of ossification as well as of other functions. The inference therefore is, that the original cause of the disease, whatever it may be, is located within the canal.

Considering the disease as a dropsy, as a collection of fluid within the canal, we can readily conceive the possibility of its obstructing the deposition of bony matter, precisely as in hydrocephalus, the bones composing the cranium are scarcely ever of a natural size in any of their dimensions, and in some instances, where an attempt seems to have been made towards the formation of bone, there is a great deficiency of calcareous matter. The cranium in such cases is thin, flexible, and scarcely differing from cartilage; or it is sometimes interspersed with small stellated patches of bony matter.

From reflecting on the character of this disease, I had early adopted the opinion, that the deficiency of bone arose entirely from the pressure of the fluid, preventing the deposition of bony matter, and an instance which furnishes negative evidence of this fact, is reported by Dr. Vose of Liverpool, in a case of hydrocephalus cured by

puncture. In this case the cranium is represented to have been a thin membranous bag; but on removing the pressure occasioned by the fluid, a rapid secretion of bone succeeded.

As hydrorachitis is not necessarily subsequent to, or accompanied by any other disease, adequate to the removal of bone by promoting its absorption, I conclude that there could have been no vacuity in the bony structure antecedent to the internal disease, and whatever lesion may have occurred, must have been a consequence, and not the cause of the disease. The absence of a portion of bone, although it may possibly give rise to hernia, cannot, I apprehend be the cause of a dropsy that originates in a structure with which it has no connexion. The arachnoid membrane which secretes and encloses the fluid has no connexion with the vertebræ, and in a hernia of the medulla would be more likely to be ruptured than to commence the effusion of a serous fluid. BERTRAND, in 1786, about a century after the more accurate observations of RUYSCH, called the disease a hernia of the medulla spinalis. It is difficult to ascertain precisely whether he referred to the disease in question, or to hernia of the spinal marrow, which, according to HUNTER, UNDERWOOD, and others, sometimes occurs, but which is totally different from dropsy. It is in every important character closely allied to hernia cerebri, and has the same relation to it that hydrorachitis has to hydrocephalus. It is probable that Bertrand never examined carefully a case of spinal arachnoid dropsy, or he would have discovered that it possessed none of the characters of hernia.

Direct and natural as these inferences appear, they are generally admitted only in theory, and indeed the opinions and practice of high authority in Europe, have been predicated on the supposition of a primitive defect in the spine as a cause of this dropsy; for, within twenty years, the disease has been professedly viewed and treated by a surgeon of eminence as a hernia. This idea arose, I have no doubt, from the erroneous term by which it has been designated, without giving due attention to the nature and seat of the complaint.

A previous deficiency of bone may be a necessary condition of hernia, whether it be of the spinal marrow or of the brain; but arachnoid dropsy, either of the brain or of the medulla spinalis, may occur without a deficiency of bone or any external evidence of its existence. Fungous excrescences may arise from the meninges or substance of the brain, or of any other part of the central portion of the nervous system, resembling hernia, or an accidental protrusion of a portion of the subjacent organ, but there is no evidence that these excrescences ever have their origin in the serous tissue.

The term *spina bifida*, although I doubt the propriety of its application to any of the diseases of the spine, may possibly be appropriate in hernia, or fungous excrescences from the *dura mater*, or periosteum of the *vertebræ*, but it expresses no one circumstance or symptom of the disease which it is meant to designate. It applies to a state of things which may accompany it, or may exist without it. A mere accidental character of the disease, therefore, and one which is by no means a constant attendant, should, I think, no longer give a name to, and a false idea of an affection with which it may be associated, but is not necessarily connected. A bifurcated spine is, so far as I can ascertain, an extremely rare attendant of *spina bifida*.

A deficiency of some of the spinous processes, or their entire absence, in one or more of the *vertebræ*, is said to be very common in this disease, and on some occasions no doubt communicates the impression when superficially examined, that the spine is divided at that part; but whether this defect in the bony structure of the canal is a cause or a consequence of the dropsy, it is manifest that it merely furnishes an outlet to a portion of the membranes distended by the hydropic effusion. An ignorance of the real nature of the disease, undoubtedly gave rise to the term, and its continuance can only tend to perpetuate the mistaken views which gave it origin.

Although considered as a dropsy, I believe its particular location has not been pointed out. Its source is the spinal portion of the arachnoid membrane, and its seat is the cavity of which this membrane forms the lining. The older writers do not seem to have apprehended that a peculiar tissue was appropriated to the secretion of serum, or that a disease of this texture resulted in the effusion of a fluid superabundant in quantity, or vitiated in its qualities. They were in a great measure unacquainted with the fact, that the characters of diseases were modified by the texture which they occupied, while the morbid agent remained the same. They were not ignorant of the existence, the usual causes, and mode of relieving or curing the more obvious forms of dropsy, but a knowledge of the functions of various structures was wanting, to enable them to arrive at a correct pathology of the disease in any of its forms, and more especially in those which are limited to particular cavities of small extent. It is not therefore surprising that one species of arachnoid dropsy should, from its location, be distinguished by a term referring to lesions of the solid parts, occasioned by a morbid action of this membrane, when neither the extent nor the functions of the membrane were known. To BICHAT we are indebted for a full demonstration of this membrane in particular, and for a more satisfactory elucidation of the



functions of membranes generally, than had hitherto appeared. The source of dropsy, according to this truly classical anatomist, is to be sought in a derangement of the functions of the serous or cellular tissues. The present theory of dropsy, as deduced from this view of the anatomical structure, has been amply developed by Professor CHAPMAN, and may be considered as established. A detail of his inquiries on the subject, and his highly important practical observations is given in his valuable paper on Hydrocephalus, in the Philadelphia Journal of the Medical and Physical Sciences, New Series, Vol. IV. page 298. It not being my intention to embrace a view of general dropsy, it is sufficient to state, that he refers it to a diseased action of the exhalents, without necessarily involving the absorbents.

I have alluded to the relation which subsists between hydrorachitis and hydrocephalus. Authority on this subject is profuse, but as on every other point in relation to hydrorachitis, too much has been left for conjecture.

All the cases related by Sir ASTLEY COOPER, in which he refers to coma as a consequence of pressure on the spinal tumour, evince the connexion which subsisted in the disease between the brain and the spinal marrow. OKES refers in a note to a case communicated by Mr. WASHBOURN, a surgeon at Marlborough, wherein pressure on the tumour distended the fontanelle, and vice versa. One of the cases which I had an opportunity of examining, furnished me with positive evidence on this point. After removing the fluid effused into the ventricles of the brain, one of which was enormously distended, that contained in the hydrorachitic sac could be readily transferred to the same cavities by merely elevating the inferior portion of the trunk.

WEPFER mentions a case, which, from its location, and its consequences, would seem to be different from arachnoid dropsy of the spinal marrow, but since it is recorded as a case of spina bifida, and certainly was either immediately or remotely connected in some way with the head, deserves to be noticed. He says he knew a girl who was born with a livid spot, five inches long, and three inches broad, situated on the right side of the upper lumbar vertebræ. The tumour was soon elevated more than the thickness of the little finger. A surgeon opened it, and a limpid serum issued from the orifice; when about three ounces were discharged, he closed the wound which readily healed. The tumour afterwards arose, and the mother opened it six times by scratching it with her nails, and each time about three ounces were discharged. These wounds the surgeon had no difficulty in healing, although they were very unscientifically inflicted. When the wounds were healed, and the lacerated surface was cicatrized



over, and no tumefaction of the part remained, a swelling appeared first on the "right frontal bone," and then on the left, and finally extending to the parietal and other bones, developed a case of well-marked hydrocephalus; and there was an enormous increase in the size of the head.

VAN SWIETEN, in the twelfth volume of his Commentaries, page 251, remarks in reference to this case, "perhaps the lymph descends from the ventricles of the brain." This I consider a matter of no consequence, as effusion may take place in any part of the cavity lined by the arachnoid membrane: but in the case alluded to, there is no evidence that any communication existed between this cavity and the tumour, and although evidently connected with parts exterior to the substance of the brain, it is by no means certain that it was a case of arachnoid dropsy. Its position on the side of the vertebral column, its appearance and progress, connected with the tumefaction of the scalp, would induce the supposition that the effusion was from cellular membrane, and bore a stronger resemblance to local anasarca than to hydrorachitis.

However this may be, it is certain that dropsy of the spine is seldom elsewhere located than on the middle line of the vertebral column, and with a very few doubtful exceptions at the junction of the last lumbar vertebra with the sacrum. A case mentioned by WARNER, Cases in Surgery, page 125, appears to me to have been hydrocephalus. He says he saw a tumour on the occiput precisely resembling those which occur on the spine. Although in this case, the occipital bone was almost wholly defective, yet the child was lusty and strong, and there was no visible disease of the limbs. He advised nothing but palliatives; the tumour was, however, opened by another surgeon, and the child died in a few days.

It is important to distinguish with greater accuracy than has hitherto been done between hydrorachitis and diseases which bear a general resemblance to it. My acquaintance with parenchymatous tumours on the spine, as they are called by Underwood, with herniæ or fungi of the medulla spinalis, is too limited to enable me to describe with precision the best modes of distinguishing them from the tumour in hydrorachitis; but in the latter disease there is an effusion more or less resembling serum within the spinal cavity, and most probably within the cavity lined by the arachnoid membrane; the tumour, which is generally present, is soft, fluctuating, and elastic; it is mostly diaphanous, and always has a direct communication with the vertebral canal. In the tumours which resemble it, none of these characters usually obtain; their connexion with the interior of the

canal is doubtful, they are never elastic, and excepting in cases of hernia, always arise exteriorly to the dura mater, or from this membrane.

When the tumour is seated at the base of the sacrum, which appears to be its proper location, as it is rarely found in any other position, there is a diagnostic mark which I consider more important than any above mentioned, and which, so far as I could discover, has never been before noticed. It is a spot at the most projecting part of the tumour, of a firmer consistence than any other portion of its parietes, and which, from its appearance, and the circumstance of a small quantity of fluid issuing from it soon after the birth of the child, I had regarded until lately as the cicatrix following a spontaneous or accidental rupture at the part. But it marks the termination of the spinal marrow, which is proportionately longer in infancy, and owing to its displacement at an early period, as was before observed, extends with the branches composing the cauda equina, to the apex of the sac, where their filaments are apparently lost in the firm flesh-like substance alluded to. The sacral nerves spring from this substance as from a second point of origin, and in the dissections hereafter detailed, I was not able to trace their connexion with the descending filaments from the spinal marrow. Neither the spinal marrow nor its immediate branches appear to have any determinate connexion with the sides of the tumour, until they reach the apex, although I have met with adventitious adhesions slightly uniting them to each other or to the walls of the sac, which were probably the result of inflammation in the arachnoid membrane. The importance of this view of the anatomical arrangement of parts will be referred to when noticing the modes proposed for alleviating or curing the disease.

I shall now give a short detail of the two cases, which fell under my observation, and first drew my attention to the disease.

CASE I.—W. G. born May 22d, 1826. The mother stated, that at the birth of the child, a livid spot was observed on the lower part of the back, and the midwife informed her that “a joint was missing.” The spot became tumid in a few days, and a watery fluid was perceived to exude from the upper part of the tumour, by a perpendicular fissure which soon closed. When I first saw him he was more than two months old; a large boy, and his general aspect very healthy. My note made at the time states, that a tumour presented apparently at the base of the sacrum, or possibly over the upper part of it, of a cordate form, and about two inches and a quarter in length,

by two inches broad, and elevated in the middle more than half an inch. Its general colour was reddish, in consequence of being traversed in every direction with red streaks, the ramification and anastomosis of minute vessels, somewhat resembling a thin bladder distended with blood and water, imperfectly intermingled. There was a cicatrix precisely in the middle where it had been open, and which seemed to give it the heart shape which it presented. On pressing with the finger on the place of the spine, at the edge of the tumour, I could not perceive any deficiency in the vertebræ. As I did not know at that time the residence of the child, it was nearly two months before I saw him again. At this time the tumour was very large; its horizontal diameter at the base about three inches and a half, the perpendicular nearly three inches, and the elevation above the surrounding integuments about two inches. Its appearance is nearly as before, but I think not quite so diaphanous. It is obviously increasing in size, as a part of the sound integuments are elevated, and constitute a portion of the base of the tumour, which the mother says has always preceded its sensible enlargement. They are first elevated, then appear inflamed, and afterwards assume the diaphanous appearance of the other part of the tumour. The pulsation of the aorta is distinctly felt at the upper edge of the tumour. There is no paralysis, nor any symptoms of hydrocephalus, the excretions are natural and voluntary, and the child is robust and active, and, in short, there is full evidence of perfect health, and of a healthy conformation, excepting in this particular. He is now about four months old. In this situation he continued many weeks, without any other change than a gradual increase in the size of the tumour, and the consequent progress of the disease. I saw him occasionally, but was called, January 26, 1827, and found that the tumour had commenced ulcerating about the 14th, attended by a very slight fever, not sufficient to create any alarm. The tumour is about fourteen inches in circumference, the integuments surrounding it are red, as from inflammation, forming a ring about ten lines in breadth, nearly all around the tumour, with a margin pretty well defined. This redness disappeared next morning, but occurred occasionally for two or three days. The ulceration appeared to commence and extend to the greatest depth, where the old cicatrix remained in the centre, probably in consequence of a thickening of the integuments in this part from previous ulceration; as the walls of the sac are thicker here than elsewhere, and appear less vascular. The ulceration of the integuments daily progresses, but not very rapidly, his strength has diminished, he is pale, but has not lost much flesh; he takes his food with



some avidity, but occasionally deglutition has been rather difficult for a few days, and he cannot readily take the breast.

*February 2d.*—A small quantity of fluid has, at various times within the last week, issued from different parts of the ulcerated surface; but to-day, the tumour ruptured, and after two or three ounces had been discharged, I reapplied the dressings, to prevent a further flow at that time. The dressing was a simple cerate, and employed chiefly to protect the tumour. The ulceration has extended nearly over the whole surface: it completely occupies the central parts, and has considerable depth at the upper part. The discharge has continued gently through the day and evening. Pulse about 180 in the minute.

*February 3d.*—To-day the sac suddenly discharged most of its contents: I saw him soon: the depression was considerable, but not so great as I had expected. The pulse was weak, and about 200. The collapse of the tumour showed a deficiency in the spine, the vacuity large enough to contain a pullet's egg. At this time there are symptoms of cerebral effusion. A small quantity of fluid issued from his eyes. The pulse is very weak, and upwards of 200.

*February 4th.*—The sac is again filling, and when distended, the skin is warmer, and the pulse more frequent. The stools are greenish, and their passage has given him pain, for several days past. The urine is passed involuntarily. His eyes do not appear to be entirely insensible to the action of light, but its impression is doubtful. I noticed that his pulse was subject to sudden alterations, which appeared to have some relation to the quantity of fluid in the sac; the discharge of which, on account of the extensive ulceration, could not be controlled. On one occasion, when his pulse was certainly much above 200, I drew off, from estimation, one ounce of the fluid, and immediately found his pulse 180, and fuller than before. It soon afterwards rose.

Irregularity in the discharge of fæces and urine, as well as in the circulation, continued. The temperature, both of the superior and the inferior extremities, varies, and they exhibit a little convulsive agitation. This agitation continued, and increased until death, which occurred this evening. A few hours before death his breathing became very laborious, and he was unable to swallow. Considerable quantities of flocculi, resembling coagulated lymph, were mingled with the fluid discharged yesterday and to-day.

A post mortem examination was made, February 5, in which I was assisted by Dr. J. R. BARTON and Dr. J. W. ASH, and the preparation procured, from which the annexed drawing was made. See



plate I. Dissection presented the following appearances. On exposing the cavity of the sac, it was found to be, in part, occupied by the lower portion of the spinal marrow, and the cauda equina, which entered it by an opening beneath the last lumbar vertebra, occasioned by a deficiency in the posterior part of the sacrum, in which the spinous processes were wanting. On each side of the middle line of the sacrum, on its posterior face, was a ridge of bone, the commencement, or abutments, of the bony arch, which, in the healthy condition, encloses the sacral nerves and the prolongation of the medulla spinalis. The lower anterior portion of the sac lay in contact with these ridges and the space between them. The opening by which the sac and its contents communicated with the spinal cavity, would barely admit the point of the little finger. The lumbar vertebræ were natural. The sac consisted of the distended dura mater, covering the spinal marrow, lined by arachnoid membrane, which was reflected over its internal face, and also covered the medulla spinalis and the nerves. The medulla spinalis and the nervous cords descending with it, passed freely through the neck of the sac, and, after forming a membranous expansion, became united to the dura mater at the apex of the sac. Their insertion occupied a space of about half an inch in diameter, in a thick, firm substance, of an inch in diameter. The nervous filaments could not be traced through this substance, but surrounding the insertion of the descending branches, and entirely distinct from them, certain nervous filaments arose, first in minute shreds connected by a delicate membrane, then coalescing into slender cords, formed, as they emerged from the cavity of the sac, two cords only, one of which had a ganglion; and here the two nerves united into a single trunk. These ganglia in the sacrum were situated in the foramina of the os sacrum; those of the twenty-third and twenty-fourth pairs of nerves, after their component cords had passed through the inter-vertebral foramina. I supposed the ganglionic nerves were similar to those arising from the posterior columns of the spinal marrow, and therefore called the two anterior and posterior fasciculi, although I could not, excepting in the case of the twenty-third pair, trace their connexion with the descending branches. The anterior and posterior fasciculi had distinct origins in the firm substance above alluded to, and in a few of them separated to a considerable distance. The nerves above the twenty-third, arose in the usual way, but the posterior branch of this nerve arose from the firm substance at the centre of the sac, while the anterior, descending nearly to the central point, and detaching a slender filament to it, returned at an acute angle to its proper foramen. This occurred only

on the right side. All the parts presented marks of inflammation, but the inner face of the sac the least.

The firm substance at the apex of the tumour, was situated precisely beneath the perpendicular fissure previously mentioned, and I found that it constituted what I had supposed was the cicatrix, following the slight rupture of the integuments. The skin upon it is changed, and has become identified with the parts beneath; this, together with its hardness, rendered it easily perceptible during the life of the patient.

The sacral nerves in passing to their proper foramina, occupy chiefly the lateral portions of the cavity; a few of them lay near the sides, but most of them proceeded directly through the cavity. I regret that in this case the brain was not examined.

CASE II.—A coloured child, about four weeks old, had a tumour on the base of the sacrum, its general appearance very similar to that above described, but it was more elevated, and the integuments were thicker. There was a circular spot on the apex of the tumour, three or four lines in diameter, much thicker and harder than the other parts. It was considered the cicatrix following a slight rupture, which the mother stated had taken place three or four days after the birth of the child, and from which she had observed a small quantity of fluid to issue several times. His form was remarkably handsome, particularly his head, which had not the shape peculiar to his colour. There was no symptom of hydrocephalus, nor any paralysis of any portion of the body.

In about a month I noticed considerable difficulty of breathing; it resembled snoring, and became so loud, at last, as to be readily heard in an adjoining room. General health apparently good; no paralysis; excretions free and natural; thought by the mother to be greater in quantity than natural.

A few days afterwards I noticed that the integuments over the anterior fontanelle and upper part of the os frontis, were slightly tumefied, as from the pressure of a fluid within. After this time the symptoms of hydrocephalus became daily more obvious, but the size of the spinal tumour increased very slowly, which was precisely the reverse of what happened in the case of W. G. During the last month of his life he had paralysis, with some distortion of the lower extremities, irregularity in the actions of the bladder and rectum, attended with repeated convulsions. He was four months old when he died.

A post mortem examination was made in which Dr. A. COMSTOCK assisted me. As the appearances on dissection in this case were very

similar to the last, I shall only note the variations. The tumour was not more than one-fourth the size, yet the os sacrum was less perfect at its upper posterior part, and consequently the opening into the spinal cavity was larger: it would readily admit the point of the little finger. The spinal marrow and the cauda equina, terminated as in the former case, in a thick firm substance, but smaller. The sacral nerves arose in a similar manner; but in passing to their proper foramina, lay nearly in contact with the internal part of the parietes of the sac: they were invested, however, with arachnoid membrane, which was also reflected over the dura mater lining the sac.

A direct communication existed between the cavity of the sac and the ventricles of the brain, through the tube formed by the dura mater, and by way of the fourth ventricle, which was large enough to admit the finger. The ventricles contained nearly six ounces of a limpid fluid, of which three-fourths were found in the lateral ventricle of the left side, which was at least three times larger than that of the right. The fluid in the sac was similar to that found in the ventricles. The substance of the brain was not apparently altered. The disease appears to have affected the left side more than the right. The left testicle had not descended to the scrotum: it was found lying on the psoas magnus muscle, near its entrance into the pelvis.

That the external mark, indicating the relative position of important parts within, is not an uncommon occurrence, I think may be plainly inferred from many cases: I shall refer to two or three only.

Sir Astley Cooper's case of Mrs. Little's child, is one from which I should draw the inference. After a cure had been effected, he says, "the skin now hangs flaccid from the basis of the sacrum; its centre is drawn to the spine, to which it is united, and thus the appearance of a navel is produced in the tumour by retraction of the skin." Also the case of Hannah Jackman, reported by him, and one communicated to me by my friend, Dr. HENRY LEE HEISKELL of Virginia, were in my opinion, examples of the existence of this external mark. The latter I cannot describe better than in the words of his note.

"The case was that of a coloured child, four weeks old at the time I saw it, as large as children commonly are at that age. The tumour was between the last lumbar vertebræ and the sacrum, as large as a turkey's egg, perfectly diaphanous, and filled with a transparent fluid; its apex had taken on incipient ulceration. The space between the bones would admit the ends of the fingers. There was considerable distortion of the lower extremities, the legs and thighs being permanently fixed at right angles with the body; in addition to this, there



was distortion of the feet inwards." Dr. HEISKELL had no opportunity of examining after death. The tumour remained entire.

The modes proposed for alleviating or curing the disease, are moderate and well regulated pressure, puncturing the tumour with fine instruments, the application of a ligature around the base of the tumour, and the excision of the tumour. The last need not detain us longer than to reprobate it. It never can be proper in hydrorachitis, however it may succeed in tumours which resemble it.

It is said that the application of a ligature has succeeded in the hands of a surgeon in Connecticut, but on inquiry I find the child continues paralytic as before. It is not, therefore, to be considered a cure, unless the child has since improved. The tumour sloughed away in due time, but it contained "something more than the integuments." On considering the nature of the lesion, it must appear evident that the application of a ligature would be highly injudicious in all cases similar to those which I have detailed. In the first case, all the nerves from the twenty-third to the thirtieth inclusive, would have been embraced by a ligature, and the consequences of its employment are readily inferred.

The only means, therefore, which can be safely resorted to, are pressure upon the tumour, and puncturing it with fine instruments.

The proper time for employing pressure, is at the moment the disease is discovered, and it should never be neglected by the accoucheur or midwife in attendance. It is then, in most cases, as above stated, merely a livid spot, and while in this condition, compression would afford a better prospect of success than at any subsequent period.

If this precaution has been neglected, gentle, steady and gradually augmented pressure, may still be employed, if the tumour be not large. It should not, however, be made with a block of plaster of Paris, as was ineffectually tried by Sir Astley Cooper, upon what principle I know not. Many better modes will suggest themselves to the surgeon; and that afterwards employed by himself is far preferable. That which I should adopt where the integuments are not yet elevated, would be, first to cover the part with a piece of oiled silk, and pass over this a broad muslin bandage, to encircle the body. I would then apply, as recommended by Cooper, a properly adjusted truss, similar to those used for umbilical hernia, with a regulated compress beneath the pad, which I think ought to be flat.

If there be a small tumour, I should cover it with the oiled cloth, and apply a bandage, without employing the truss, until I had succeeded in reducing its size, if this could be safely effected.



If the tumour be large, it is not probable that pressure alone will succeed; and it may indeed be productive of alarming, or even fatal consequences.

Under such circumstances, I think it would be justifiable to discharge the contents of the sac gradually, although you necessarily puncture the dura mater. Two cases are said to have been cured by this means, aided by pressure, by Dr. BOZZETTI of Padua;\* and although it has failed in the cases in which it was employed by Mr. ABERNETHY and Sir ASTLEY COOPER, it was not productive of any immediate ill effects. Nearly forty years ago, the same measure was resorted to by Dr. PHYSICK, for the cure of hydrocephalus, and subsequently by Dr. GLOVER of Charleston, Dr. VOSE of Liverpool, and others; and if the results are not such as to make us very sanguine of success, at least they seem to show the propriety, when other means fail, (as the disease is necessarily fatal when left to nature,) of resorting to this. It is not to be expected, however, that operations of this kind shall prove equally successful with those employed in ascites, &c. The fibrous dura mater does not readily heal. The proper place, and the proper mode of performing the operation, are therefore matters of some consequence. If the view which I have given of the anatomical arrangement of parts has any value, it is in directing this operation.

As the nerves occupy the apex and the lateral portions of the sac, it is obvious that punctures should be made at the base of the tumour, either above or below, and near the middle line of the body. If the hardened spot, or cicatrix, to which I have alluded, should be situated low down upon the tumour, the puncture should be made above, but generally it would be better to make it below, as there would then be less risk of wounding the descending spinal marrow and nerves.

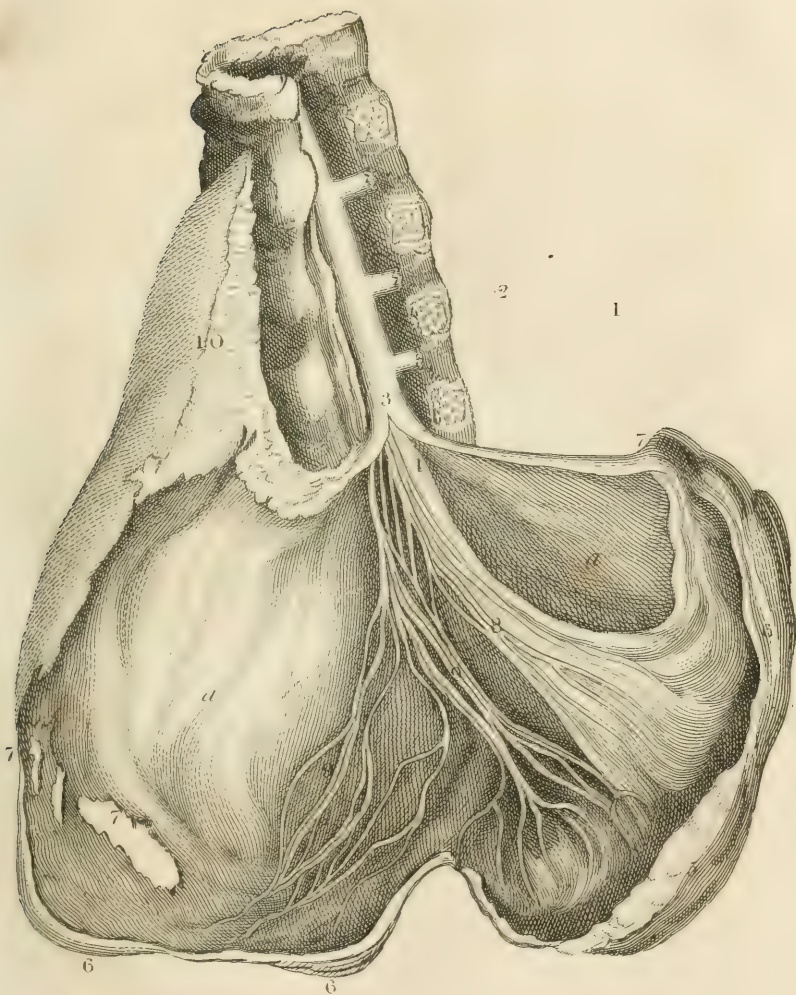
I would propose to make the puncture in the sound integuments with a fine instrument, properly curved, to avoid wounding important parts within the sac, inserting it three or four lines from the edge of the tumour, and elevating the point into its cavity. By this means the discharge of the fluid could be controlled, and the orifice readily closed. The operation should not be performed when the parts are inflamed, nor should the sac be emptied at once. The part should be supported, and even compression may be made to advantage, during the intervals. It may be proper also to try the effect of such internal remedies as are employed in hydrocephalus. I am aware that success has rarely followed any mode of treatment, but I think that an attempt to relieve or cure can generally be made with safety.

\* See Vol. II. page 221, of this Journal.

*Explanation of the Plate.*

The drawing represents the sac opened by a perpendicular slit, a little to the left of the middle line of the body. Its cavity is seen at *a, a*.

1. Ends of the bony arches of the last four lumbar vertebræ cut off.
2. The 21st, 22d, and 23d spinal nerves of the right side, cut off after they have penetrated the dura mater.
3. The dura mater at the part to which it was slit open to expose the spinal marrow and nerves.
4. The spinal marrow and cauda equina proceeding towards the apex of the tumour, expanding and attaching themselves to the walls of the sac.
5. The apex of the tumour, a thick firm substance, in which the spinal marrow, &c. terminate. Separated portions of it on each side, and from which many of the nerves arise, are represented at 6. 6. 6.
7. 7. 7. Perforations and ragged edges caused by ulceration.
8. The ascending filaments of the 23d nerve of the left side, both anterior and posterior, arising from the membranous expansion. The 23d nerve of the right side is concealed by the spinal marrow.
9. 9. Branches of the 24th nerve, and of the sacral nerves.
10. A part of the common skin, fat, muscles, &c. of the back.







## MEDICAL EDUCATION AND INSTITUTIONS.

ART. XII. *Account of the Hopital de la Pitié, Hopital de St. Antoine, Hopital Necker, Hopital Cochin, and Hopital Beaujon at Paris.* By ELISHA BARTLETT, M. D. of Lowell, Mass.

IN following the course which we have adopted, in treating of the medical institutions of Paris, in point of interest and importance to the American student, and perhaps generally, comes the Hopital de la Pitié. This establishment within a few years has taken a high rank among its kindred institutions, in consequence of the exertions and achievements of its chief surgeon, LISFRANC.

The disorders and civil wars during the regency of Maria de Medcis, had increased so considerably the number of the poor, that the singular remedy was resorted to of imprisoning them. In consequence of this regulation, in 1612 the buildings at present occupied by La Pitié were appropriated by the magistrates for this prison, in which were shut up those of the poor who were arrested. In 1657, when Salpêtrière was built, the houses of La Pitié were destined to another use. The children of the mendicants were placed there, and the two sexes each received an education proper for preparing them to live honestly and usefully. To these were added illegitimate children and orphans, who received a similar education. In 1809 the orphans were sent to the "Hospice du Faubourg St. Antoine," and La Pitié became an annex of the Hôtel Dieu, and was appropriated to the same diseases as that hospital. La Pitié now contains six hundred beds, distributed in twenty-three wards.

The visits at this hospital are made at the same hours as at the Hôtel Dieu and La Charité. After the morning visit, during part of the year, there are clinical lectures on surgery by Lisfranc, which are attended by a large number of students.

*Whole number of beds, 600.*

					Medicine.				Surgery.
Men	-	-	-	-	293	-	-	-	64
Women	-	-	-	-	207	-	-	-	36

*Statistical Table from the Annual Report of 1822.*

	MEN.			WOMEN.			Total general for 1822.	Total general for 1821.	Venereal wo- men sent by the police.
	Med.	Surg.	Total.	Med.	Surg.	Total.			
In the hospital, Jan. 1, 1822 - - -	143	34	177	165	35	200	377	513	70
Admitted during the year - - -	2242	582	2824	1520	421	1941	4765	2993	
Dismissed - - -	1938	535	2473	1268	390	1658	4131	2651	70
Deaths - - -	307	28	335	273	25	298	633	408	
Remaining 31st Dec. 1822 - - -	140	53	193	144	41	185	378	447	
Rate of mortality, one for - - -	7.77	22.0		6.17	18.24				
Mean number of days in the hospital -	20	30		36	35				

The number of individuals affected with small-pox was one hundred and eighty four, of whom forty-eight died, and one hundred and thirty-six were cured, or in the hospital at the end of the year. In 1821, there were only nineteen cases, of which but two were fatal. The ages which gave the most diseases were from eighteen to thirty. The cures were gastric and putrid fevers, pulmonary catarrhs, paralysis, small-pox, fractures, contusions, abscesses, and ophthalmias. The deaths were from bilious fevers, enteritis, pneumonias, apoplexies, tubercular phthisis, small-pox, and diseases of the heart.

*Surgery of La Pitié for the year 1822.*

Trepan - - - - -	1	Ligatures of veins of the legs	15
Cataracts - - - - -	8	Fracture of clavicle - - -	8
Empyema - - - - -	1	----- of humerus, (neck) -	3
Paracentesis abdominis - - -	80	----- of humerus, (body) -	9
Hydrocele - - - - -	8	----- of bones of fore-arm -	6
Lithotomy - - - - -	1	----- of ribs - - - - -	8
Fistula in ano - - - - -	6	*----- of thigh, (neck of bone)	12
Extirpation of cancerous tumours	12	----- of thigh, (body of bone)	6
Amputation of thigh - - - -	3	----- of leg - - - - -	4
----- of leg - - - - -	5	----- of leg, (compound) -	6
----- of toes - - - - -	6	----- of patella - - - -	2
----- of thumb - - - - -	1	Luxation of humerus - - -	4
Resection of bones of metatarsus	2		

It has already been observed that this hospital has, within a few years, become one of much interest to the medical inquirer, on account of the lectures and practice of M. Lisfranc. This gentleman may certainly be ranked among the most distinguished surgeons of Paris. The success of his amputations of the neck of the uterus in cases of disease of that organ, is well known in this country. In his practice he is one of the most thorough-going of the Broussaisists. 1

have known him in a fracture of the spine, of two months standing, with paralysis of the lower extremities, bladder, and rectum, commence the treatment by bleeding on the first day twelve ounces, second day ten, third day eight, thus gradually diminishing the daily bleedings down to two ounces. During this time an immense number of leeches were applied along the spine; say two or three hundred in the course of seven or eight days. After an interval of three or four days, he recommenced the bleedings, gradually diminishing them as before. At the expiration of this time, "C'est bien remarkable!" exclaimed the surgeon, as the patient began to use his legs, and the rectum and bladder were resuming their functions. Nothing is more common than to hear him prescribe seventy or eighty leeches daily, for a scrofulous inflammation of a joint.

There are greater facilities for the study of anatomy and surgery connected with this hospital than with any other in Paris. The two principal places for dissection are at the Pavilions connected with the school of medicine at the Ecole Pratique, and at La Pitié. Perhaps there is little choice between the two, though there are some advantages at La Pitié, for an American student who spends but a limited time in Paris. The distribution of subjects is made every day at noon in the following order. The in-dressers of the hospitals have the privilege of the first choice, the out-dressers the second, and the remaining subjects are distributed among the miscellaneous students, in the order in which their names are inscribed on the distribution book. The price is fixed by the administration of the hospitals, and is moderate.

In addition to the public establishments just spoken of, there are several private teachers of anatomy, with whom a considerable number of American and English students in Paris pursue their dissections. These gentlemen take upon themselves the trouble of providing subjects, preparing them, and furnishing rooms, tables, &c. It is somewhat more expensive to dissect under the direction of one of these private teachers; but the advantages particularly to a student who has but little time in Paris, are more than sufficient to overbalance the additional cost. One is thus rid of the trouble of procuring subjects, and removed from the noise and confusion of the public rooms. The writer dissected with Mr. FISHER, an Englishman, who has a room at La Pitié, and a class composed principally of American and English students. M. AMUSAT has also a similar establishment where dissections can be pursued a great part of the year. His terms are considerably higher.

Among other advantages connected with La Pitié, are Lisfranc's



lectures on operative surgery. The professor first gives a lecture on the operation, then performs it on the subject, and during the course, which continues about three months, each of the students does all the operations twice, which can be performed on the dead subject, under the direction of Lisfranc or some one of his assistants.

Lisfranc, as a lecturer and a man, has less of the French polish than any other public character whom an American student meets in the course of his studies at Paris. He has a goodly share of impudence, bravado and vulgarity, but in connexion with these unamiable qualities, there is a redeeming fund of wit and good humour, a high and aspiring ambition, an ardent devotion to the science and the art, which he has so much embellished and improved, and a minute and accurate knowledge of anatomy, rendering him a proud and successful rival of the first operators of the French metropolis. In the edition of Sabatier's *Médecine Opératoire*, published by Sanson and Begin, many of Lisfranc's methods of operating are detailed; but in noticing these in his lectures, he usually gets in a passion, says the accounts are travestied, calls Breschet a gross beast, a broken pot, &c. He treats with ridicule the vague and indefinite directions generally given in books of operative surgery, and insists with much emphasis on the necessity of reducing these rules as far as possible, to mathematical precision. He says operators consist of three classes—first, *the man of the world*; second, *the amateur*; and third, *the artist*. He mimics, in a very amusing manner, the style of operating by the two first, and then shows how the artist would use the instrument, and consequently how an operation should always be performed. All the time of my attendance at La Pitié, Lisfranc was promising from month to month a system of operative surgery, which was then stated to be in press.

Of the seven hospitals of Paris devoted to the ordinary diseases of adults, we have already noticed the three most important, viz. the Hôtel Dieu, La Charité, and La Pitié. We shall here briefly speak of the remaining four, leaving the consideration of those hospitals, destined for the reception and treatment of particular classes of disease, to a future number. These four are St. Antoine, Necker, Cochin, and Beaujon.

*Hopital de St. Antoine.*—The Abbey of St. Antoine was suppressed in 1790, and by a decree of the Convention in 1795, converted into a hospital, which at first contained one hundred and sixty beds. There are now between two and three hundred. This, though a small establishment, is distinguished among the other hospitals, by the



beauty of its exterior, its internal commodiousness and neatness, and the care and attention bestowed on the patients here received and treated.

*Whole number of beds, 262.*

	Medicine.	Surgery.
Men - - - - -	108	32
Women - - - - -	98	24

*Statistical Table from the Annual Report of 1822.*

	MEN.			WOMEN.			Total general for 1822.	Total general for 1821.
	Med.	Surg.	Total.	Med.	Surg.	Total.		
In the hospital, Jan. 1, 1822	97	32	129	67	18	85	214	257
Admitted during the year	1,277	404	1,681	876	195	1,071	2,752	2,487
Dismissed -	1,084	371	1,455	684	176	860	2,315	2,124
Deaths -	184	34	218	170	18	188	406	408
Remaining 31st Dec. 1822 -	106	31	137	87	19	106	243	212
Rate of mortality, one for	6.89	11.91		5.02	10.78			
Mean number of days in the hospital -	29	29		35	35			

*Surgery of St. Antoine for the year 1822.*

Incisions for anthrax - -	5	Strangulated hernia -	2
— for whitlow - -	30	Incisions for abscess -	35
Lithotomy - -	1	Polypus of nose - -	2
Amputation of thigh - -	1	Hydrocele - -	2
— of leg - -	3	Extirpation of sarcomatous tumours	2
— of great toe - -	1	Fractures - -	70
Resection of tibia - -	1	Ligatures of arteries -	10
Extirpation of scirrhus tumour	1		

### *Hospitals Necker, Cochin, and Beaujon.*

These hospitals are not of sufficient extent or importance to justify giving a separate notice, with a table of population, mortality, &c. for each of them.

The Hospital Necker was founded by Madame Necker, in the convent of the Benedictines. The number of beds in 1822 was 120. There were then nearly two thousand patients received annually.

The Hospital Cochin was founded in 1782 by M. Cochin, curate of St. Jacques. It contains 125 beds, is clean and well ventilated, and its inmates are attended with particular care by the sisters of St. Martha, distinguished by their active and careful attention.

The Hopital Beaujon was founded in 1784 by M. Beaujon, a rich financier, and intended for the reception of twenty-four orphans, twelve of each sex. In 1795 a decree of the convention changed the establishment into a hospital for the sick and wounded. The benevolent founder expended on the hospital nearly three hundred thousand dollars, besides making an annual donation of between three and four thousand dollars. Excepting the hospital of St. Antoine, this is the most beautiful in Paris. There are no large wards, the interior being divided into rooms containing six or eight beds. It is served by the sisters of St. Martha, and is deservedly celebrated for its cleanliness and salubrity. From 1804 to 1814 there were received at St. Antoine 13,787 patients. In 1822 there were twenty-eight patients with small-pox, ten of whom died. There were received into the three above-named hospitals in 1822, 4313 patients. We shall give in one table the

*Surgery of the Hospitals Necker, Cochin, and Beaujon, for the year 1822.*

Amputation of thigh	-	-	5	Fractures	-	-	-	18
_____ of leg	-	-	5	Extraction of cancerous tumours				9
_____ of fingers	-	-	8	_____ of polypus of nose	-			2
_____ of toes	-	-	2	Incisions for whitlow	-	-		9
_____ of forearm	-	-	1	_____ for phlegmon	-	-		3
_____ of hand	-	-	1	_____ for abscess	-	-		15

*Lowell, Massachusetts, March 10, 1829.*

## REVIEWS.

ART. XIII. *Pathological and Practical Researches on Diseases of the Stomach, the Intestinal Canal, the Liver, and other Viscera of the Abdomen.* By JOHN ABERCROMBIE, M. D. Fellow of the Royal College of Physicians of Edinburgh, &c. and First Physician to his Majesty in Scotland. Edinburgh, 1828. pp. 396, 8vo.

**MORBID** affections of the digestive organs stand in the avenue by which the physician enters the field of practice, exacting from him the most scrupulous attention and continued observation. In addition to their multitude, and the variety of forms in which they appear as idiopathic or independent diseases, they are ever ready to fall into the train of other maladies, sometimes exasperating these to greater violence, and at others usurping their places and taking on characters more formidable than those of the original affections. It is therefore nowise surprising that they should have formed frequent subjects of inquiry, and received an ample proportion of speculation. Nor can it be denied that much useful practical information has resulted from previous observation and experience, but it is very certain that the pathology of diseases of the abdominal viscera has hitherto been exceedingly obscure, and so erroneous withal, as to lead often to the most dangerous modes of treatment. No better proof we think need be given of the confused opinions which have prevailed upon these topics, than a reference to the various modes of practice pursued by physicians of the greatest celebrity.

Within the last twenty years a precision has been attained in the diagnosis of diseases, which has greatly advanced the progress of the healing art, and for this incalculable advantage we certainly stand indebted mainly to the researches of the French. Dr. Abercrombie would fain have us believe that he is no advocate for the doctrines of the French pathologists, yet it is evident even from the first paragraph of his book, that he has attempted to build upon a foundation laid by them. He pays the strictest attention to the distinctions established by these in relation to the primary textures of organs, and the various and peculiar morbid derangements to which these tissues are liable. Had Dr. Abercrombie conformed still more closely to the tenets of his continental brethren, especially in regard to some practical points,

we think his book would have possessed still greater value. As it is, however, we look upon it as composed under more favourable auspices than any other upon the same subject, in the English language at least, and propose giving a view of the most important matters of which it treats. This summary will be found rather analytic than critical, the chief object being to present our readers with practical information.

The author sets out with a physiological and pathological view of the various structures composing those organs, the diseases of which he proposes to investigate, and as we think his introductory observations may be interesting to many of our readers, we shall make free extracts from them.

The peritoneal, the muscular, and the mucous coats of the intestinal canal are the three structures concerned in this treatise.

The peritoneum, as is well known, is a serous membrane, liable to both acute and chronic inflammation, and to various remarkable changes of structure, some of which are evidently the result of inflammatory action, whilst others seem to have a different origin. The first effect of a certain low degree of inflammatory action upon serous membranes, appears to be simply an increased deposition of the serous fluid; and in this manner it is probable that a state of these membranes, which if not actually inflammatory, closely borders upon it, is sometimes relieved; the increased quantity of fluid being afterwards absorbed, and the parts thus recovering their healthy relations.

Remarkable varieties in the characters of the fluid deposited are, however, observed in different morbid conditions, some of which will afterwards be described.

Besides the diversities exhibited in their effused fluids, serous membranes, are chiefly liable to three morbid conditions of structure, viz. simple thickening, tubercular disease, and another affection wherein the surface of the membrane appears covered with nodules of various shapes and sizes, of a semi-pellucid character and smooth rounded surface.

The second structure is the muscular coat, which completely invests the whole extent of the canal. Little appears to be known relative to the intimate nature of diseases of muscular fibre, except what relates to derangement in its functions. In a muscular investment of a cavity, the principal deviations from the healthy state, according to our author appear to be the following:—

“A morbidly increased but uniform and harmonious action. This appears to arise chiefly from causes of irritation applied to the internal surface of such cavities. In this manner we see vomiting produced by various irritations applied



to the stomach, and diarrhœa by similar causes applied to the intestinal surface. A similar effect seems to arise from a morbid irritability of the surface itself, provided it be uniform over a considerable extent of the membrane; the ordinary stimuli producing in this case the same effect that the irritating causes do in the other.

“A morbidly increased but partial and irregular action. This appears to arise chiefly from morbid irritability of small portions of the internal surface; the ordinary stimuli producing at these parts an increased action, with which the other parts do not harmonize. This appears to be the state which is often expressed by the indefinite term spasm. It is seen in the urethra and œsophagus, in the affection which is called spasmodic stricture, and a similar condition appears to occur in the bowels, particularly in certain cases of dysentery, in which we find morbid discharges from the lower part of the canal, with retention of the natural fœces in the parts above.

“Diminution or loss of muscular power. In a muscular covering investing a cavity, this appears to arise from two causes, namely, over-distention, and inflammation. The former we see distinctly take place in the bladder, and there is reason to believe that something similar occurs in the bowels in certain states of ileus. Inflammation seems also to destroy the action of muscular fibre. Thus intestine which has been highly inflamed is generally found in a state of great distention, showing the complete loss of its healthy muscular action; and, if the disease has gone on until the intestine has either become ruptured or has given way by ulceration, it is found to have fallen together like an empty bag, without any appearance of muscular contraction, whereas healthy intestine, when it is empty, contracts uniformly into a round cord.”

Another result of inflammation upon muscular fibre is gangrene, which, when found in the intestinal canal, affords strong reason to conclude that inflammation has existed in the muscular coat. It is, however, probable that gangrene may occur in each of the coats separately, without affecting the others, but giving rise to most important diversities in the symptoms.

The fourth and last deviation from a healthy state which our author mentions as occurring in the muscular coverings of cavities, is a thickening, described by French writers under the name of hypertrophia. By some of these, however, the term has been applied so as to designate a general thickening of all the coats.

The principal morbid affections of the mucous membrane are—

Inflammation and its consequences. The effect of the lowest degree of this appears to be simply an increase of its proper secretion, more or less changed in its qualities from the healthy condition. In another state of inflammation, we find the formation of aphthous crusts, and in a third the deposition of false membrane. This last is most frequently observed in the bronchial membrane, though it is also occasionally met with in the mucous tissue of the intestines. In a more advanced stage, inflammation of the intestinal mucous coat

terminates by softening or an ash-coloured pulpy degeneration of portions of the membrane; these fall out and leave spaces which are apt to pass into ulceration. Other alterations produced by acute diseases are mentioned by our author, but we shall proceed to notice those connected with the chronic forms of inflammation, chiefly indicated by an increased morbid secretion, kept up during a long period. "The membrane," he says, "is apt in such cases to become thickened and even indurated, so as considerably to diminish the capacity of the cavity. In this manner is formed stricture of the urethra, and diminution of the area of the intestinal canal."

"The follicles appear to be liable to a vesicular or pustular disease, which passes into small, defined, distinct ulcers, quite unconnected with any disease of the mucous surface." The cardia, pylorus, and rectum afford the most usual seats for affections of a tuberculous character, probably seated in the follicular or glandular structure. In these situations they frequently assume a scirrhus character.

The parts concerned in the absorption of the alimentary matter are sometimes so diseased, that although elaboration takes place in the usual manner, the chyle may pass off without entering the circulation. Disease of the mesenteric glands is the cause most familiar to us; but the same effect appears to result from certain conditions of the surface of the mucous membrane itself.

Morbid affections of the stomach our author has arranged and treated of under three heads or classes. The first includes those of an inflammatory kind, with ulceration and its consequences. The second embraces those denominated organic affections, and the third functional disorders, including dyspepsia.

He regards the disease commonly described under the name of *acute gastritis*, as extremely rare in an idiopathic form, unless produced by the action of acrid poisons, and observes that he has often been astonished to find how seldom he had met with signs of inflammation in the stomach, even when the organs most nearly connected with it had been inflamed in the highest degree. He considers the mucous membrane as the chief if not the entire seat of gastritis, which even in this situation is extremely rare as an acute or idiopathic disease. It is of the greatest importance that those who make observations upon this subject, should be well versed in the signs indicating the healthy and morbid states of the textures which are the seats of disease. Without some standard to which the appearances observed may be referred, the conclusions drawn from dissections will often tend to confuse and embarrass pathology. In this country

much valuable light has been shed upon these points by Dr. HORNER, to whose experimental inquiries and observations relative to the healthy and diseased appearances of the mucous membrane of the stomach and intestines, we would call the attention of all interested in the cause of a rational pathology.\*

The difficulty of establishing the positive diagnostics of inflammation, has created great confusion in the treatment of gastric affections, symptoms closely resembling those attendant on active inflammation, having often been found speedily yielding to a treatment which would generally be esteemed highly dangerous in acute gastritis.

Without dwelling upon the symptoms of acute gastritis enumerated by our author, we shall proceed to notice another affection of the organ which he views as of much practical importance, namely, inflammation advancing slowly and insidiously into a chronic form, passing into ulceration, and assuming the characters of organic and hopeless disease. In the early stages of this affection, the prominent symptoms are often such as merely indicate derangement of the functions of the stomach, and are apt to be included under the general term dyspepsia. We shall notice a few of the symptoms of this affection which may perhaps be looked upon as the most decisive. Pain in the region of the stomach, various in degree, and mostly complained of only after eating, remaining with severity whilst digestion is going on, and subsiding with the completion of that process. The patient is on this account reluctant to take food, and apt to make use of such an expression as "I should be quite well if I could do without eating." In other cases there is no actual pain complained of, but a feeling of uneasiness and heat, and a great degree of pyrosis, the formation of an acrid fluid, and the conversion of every species of diet into intense acidity. Vomiting is an occasional attendant, but in the forms of this insidious disease there is great diversity in the symptoms. In a practical view, the most important varieties under which this ulceration of the inner surface of the stomach presents itself are the following:—

"1. A small defined ulcer of limited extent, with evident loss of substance, and rounded and elevated edges, varying in extent from the size of a split pea to that of a shilling. We may find only one such ulcer, every other part of the stomach being in the most healthy state; or we may find that there has been a succession of them, some of them cicatrizing, and others appearing, while the

\* See Vol. I. No. I. of this Journal.



health of the patient gradually sunk under the disease, which after all may be found to have been of no great extent."

"2. Ulcers like the former, of small extent, perhaps the size of a shilling, but complicated with thickening and induration of the parietes of the stomach, perhaps to the extent of a crown-piece or more around the ulcer, all the rest of the stomach being perfectly healthy."

"3. Extensive irregular ulceration of the inner surface of the stomach, generally complicated with thickening and induration of the coats, and fungoid elevations."

Our author remarks that in some cases there is no actual ulceration, the prominent morbid appearance being a thickened state of the mucous membrane to a greater or less extent. The thickened portion in this case may be of a pale ash colour, or of a brown colour, or of a dark colour, with the characters of melanosis. He notices other complications of this disease, and remarks that there is much variety in its terminations. It may prove fatal by gradual exhaustion, by hæmorrhage from the ulcer, by perforation of the coats of the stomach, the contents escaping into the peritoneal cavity and producing peritonitis. These observations are illustrated by a selection of interesting cases, setting forth the progressive symptoms, and the morbid appearances after death.

A French writer, M. GERARD, has published a memoir upon this subject, entitled, "*Des Perforations Spontanées de l'Estomac.*" Several cases are described by Dr. CRAMPTON and Mr. TRAVERS, in the *Medico-Chirurgical Transactions*, and by M. EBERMAIER, in the *Journal Complementaire*, July, 1828.\*

If the disease can be detected through its difficult diagnosis, our author recommends a treatment adapted to an early period, consisting chiefly of free and repeated topical bleeding, followed by blistering, issues, or the tartar emetic ointment. The food must be very small in quantity, and of the mildest quality, chiefly or entirely of farinaceous articles and milk, with total absence from all stimulating liquors. Distention of the stomach, even by the mildest articles, should be carefully avoided. Bodily exercise, so useful in dyspepsia, must be refrained from, and hence the importance of endeavouring to distinguish between the two affections. Little internal medicine is thought proper, except what is just sufficient to regulate the bowels. But in the more advanced stages the treatment must be changed, the external applications laid aside, and internal remedies resorted to.

\* See Vol. III. p. 452, of this Journal, and also the *Periscope* of the present number, article Pathology.



Among these he mentions the oxide of bismuth, lime water and nitric acid, small opiates, combined with articles of a mucilaginous nature, astringents, such as kino, alum, and rhatany root, the arsenical solution, small quantities of mercury, as also of nitrate of silver, and especially the sulphate of iron. The author has left the choice and adaptation of these articles to the discrimination and judgment of the practitioner, and we infer, from the heterogeneous assortment of remedies presented, that his *methodus medendi* is founded upon the most obscure views. He thinks it yet remains somewhat doubtful whether the disease admits of a cure after it has advanced to ulceration, for, when cases terminate favourably, the previous existence of ulceration cannot be ascertained with certainty. That cicatrization can take place in the mucous membrane of the stomach, ample proof is afforded, by cicatrices being found in it after death. These, however, have been observed in cases where the disease has terminated fatally. It is plain that our author's views in relation to this subject are far from being clear.

Among other modifications assumed by inflammatory affections of this tissue lining the superior portions of the alimentary canal, several are worthy of particular notice. An inflammatory condition of the whole course of the mucous membrane, from the pharynx downwards, Dr. Abercrombie thinks sometimes occurs as an idiopathic affection, though most generally observed at an advanced stage of other diseases, as simple fever, pneumonia, or other phlegmasiæ. Without discussing the claims which might entitle this affection to rank as an idiopathic or symptomatic form of disease, we shall simply quote the description given of it by our author.

“There is,” says he, “a peculiar rawness and tenderness of the whole mouth and throat; often with a dry and glazed appearance of the tongue, a deep redness of the pharynx, interspersed with aphthous crusts; and in some cases, the whole pharynx presents one continued dense crust of an aphthous character. There is generally tenderness on pressure in the epigastric region, with uneasiness in swallowing along the whole course of the œsophagus, and great uneasiness in the stomach, excited by the mildest articles of food or drink. In some cases this is immediately communicated to the bowels, and the articles speedily pass off by a rapid diarrhœa. In some cases vomiting takes place, and in others, both vomiting and diarrhœa.”

The remedy which Dr. A. has found most useful in his practice, is lime water, either alone or mixed with an equal quantity of a strong decoction of quassia. Small opiates he says are required. The food ought to be of the mildest description, but if indications of sinking appear, wine or brandy should be given, mixed with arrow root.

Our author thinks that the aphthous affection of the mouth and throat which attacks and sometimes proves fatal to infants, has some alliance to the diseased condition of the mucous membrane just described, and that it is moreover often found connected with minute ulcers of the mucous membrane of the intestine.

The affection, to which the French have given the name of diptherite, is another modification of disease in the mucous membrane of these parts. This has appeared in Europe as an epidemic, chiefly attacking children.

“The first symptom is a deep redness of the tonsils or velum, without swelling or ulceration, but with the formation of aphthous crusts which are generally of a pure white colour. When these crusts are either removed or drop off spontaneously, the membrane beneath is seen to be deeply red without breach of surface, and the crust is reproduced in a few hours. We find usually excoriation, or very minute ulcers along the inner membrane of the cheeks and lips, and a painful excoriation of the nose, often sponginess and bleeding of the gums; and, in some cases, the whole mouth becomes inflamed in a manner resembling the effects of mercury. There is in general little fever, but great prostration of strength, and often a diseased state of the whole system.”

The absence of ulceration will serve to distinguish it from cynanche maligna, and the sore throat of scarlatina. Sometimes this disease is slight, at others rapidly fatal, especially when it extends to the larynx. Indeed, on gaining this situation, our author thinks that its course is but little controlled by medical treatment. Under these circumstances his chief reliance is placed upon the free use of calomel, combined with occasional opiates. General bleeding cannot usually be borne, and blisters are apt to become gangrenous. Wine is sometimes necessary to support the strength, and the mineral and vegetable acids have been thought useful. When the stomach has been affected, bismuth or lime-water, with small opiates, are recommended. M. BRETONNEAU, who has treated of this affection at great length, in a work entitled “*Des Inflammations Speciales du Tissu Muqueux*,” trusts chiefly to the free use of calomel, and touches the fauces by means of a sponge, with a mixture of equal parts of honey and hydrochloric acid. A similar mode of treatment has been found of advantage in some cases apparently of the same nature that have occurred in America.\*

Our author notices in this part of his work, another affection, differing entirely from those which have been the subjects of the preceding observations; namely, the appearance of a soft gelatinous or pulpy

\* In the *Edinburgh Journal of the Medical Sciences* for October, 1826, there is a paper upon this disease by Dr. Hamilton, jun.

degeneration of the substance of the stomach observed after death, when part of the softened portion is commonly found to have fallen out, leaving an opening with the surrounding parts in a thin state, and partially softened, but in general without any appearance of increased vascularity. The perforation is in some cases very large; in others, there are four or five perforations, separated by narrow portions in a partially softened state; and, frequently, there is no actual perforation, but merely a considerable extent of the stomach much softened, which tears upon the slightest touch. This appearance was noticed by HUNTER, who ascribed it to the solvent power of the gastric juice. In some cases it seems to have been preceded by disease of the stomach, whilst in others there have been no grounds for anticipating any such affection. Upon the whole, our author inclines to the belief that the affection takes place after death. Nearly the same observations may be applied to what the French writers have denominated *remolissement* of the stomach, an interesting memoir upon which has been published by M. LOUIS.

Among other affections embraced by our author under the separate head of "*Organic Diseases of the Stomach*," are, induration and thickening of the coats of the stomach, and diseases seated in the pylorus and cardia. In the first, the disease sometimes consists of a uniform hardness, with the characters of scirrhus, or almost cartilage; in others, it has more the appearance of a mass of tubercular disease, and frequently, a considerable mass of tumours projecting from it internally, is of a soft texture resembling the substance of the brain.

Disease of the pylorus, though liable in its first periods to be confounded with other gastric affections, is in its more advanced stage generally to be distinguished by periodical vomiting, occurring at intervals after meals, commonly accompanied with some fixed uneasiness in the region of the stomach. Sometimes induration can be felt externally. But extensive disease of this locality has been found after death where these and other characteristic symptoms had not previously existed. Our author relates cases illustrating the progress and termination of this scirrhus affection seated in both the orifices of the stomach. It appears very probable that the duodenum is occasionally the seat of affections which are mistaken sometimes for those of the stomach and liver. The leading peculiarity of disease in this portion of the intestinal canal, is that the food, taken with a relish, occasions no inconvenience until it begins to pass out of the stomach, an hour or two after a meal, at which time the pain is often felt with great severity, and may continue for several hours, generally extend-



ing obliquely backwards in the direction of the right kidney. For a good illustration of the peculiar characters of disease of the duodenum, Dr. Abercrombie refers to a case related by Dr. IRWIN, and published in the Philadelphia Journal for August, 1824.

In the next section our author introduces us to the familiar, may we not say almost threadbare, subject of dyspepsia, considered as a morbid derangement of the function of digestion, unconnected with any change of structure, either of the stomach itself, or of the parts adjacent. The dependence of the digestive process upon the influence of the eighth pair of nerves, he justly considers one of the most interesting discoveries made by modern physiologists. But although it has not yet led to any important practical results, we still think that, like many other recently demonstrated facts, it is destined to play, at some future period, an important part in the system of inductive medicine.

The functional derangements of the stomach mentioned by our author as the least conjectural, are the following:

Deficient action in the muscular coat, occasioning too long a detention of the alimentary matters, followed by imperfect changes and chemical decompositions. A morbidly irritable state of the mucous membrane leading to excitement of the muscular coat, and producing an evil precisely the reverse of that just mentioned, namely, either speedy rejection of the food by vomiting, or its propulsion downwards in a half digested state. Deficiency in the quantity, or alteration in the qualities of the fluids of the stomach.

Some of the most important rules laid down by Dr. A. for the treatment of dyspepsia, are the following. Regarding the muscular action of the stomach as more vigorous when the contents are in small quantity than when there is much distention, and supposing that the secretions are regulated by the quantity of ingesta they have to act upon, he lays it down as the first and great principle in the treatment of indigestion, that the quantity of food should be restricted so that no more shall be taken than the stomach is found capable of digesting in a healthy manner. It is found that the digestive process is carried on slowly, particular care should be observed not to take additional food until full time has been allowed for the solution of the former. If, for instance, the healthy period be four or five hours, the dyspeptic should probably allow six or seven. This is one of our author's golden rules, which is on no account to be infringed upon by the opposite course of breakfast, lunch, and dinner, all within the space of seven or eight hours. The quality of the articles taken as food, though usually regarded as the most essential consideration in the



treatment of dyspepsia, Dr. A. considers a minor consideration when compared to the importance of quantity. In fact, he thinks that the dyspeptic might be almost independent of any attention to the quality of his diet, if he rigidly observed the necessary restrictions in regard to quantity. "It is often," he continues, "remarkable, how articles which cannot be borne as a part of mixed diet, agree perfectly when taken alone; how a person, for example, who fancies that milk disagrees with him, will enjoy sound digestion upon a milk diet; and how another, who cannot taste vegetables without being tormented with acidity, will be entirely free from acidity on a vegetable diet." For ourselves, we think that the diet in these affections should be regulated by the state of the mucous membrane of the stomach. Sometimes the irritation in this amounts almost, if not absolutely to inflammation, in which case animal food, though generally agreeing best with dyspeptics, would prove highly injurious, and the diet should be restricted entirely to rice water, rice jelly, thin arrow-root, or bread and milk, according to circumstances, with a total abandonment of every thing stimulating, either solid or fluid.

In the medical treatment of dyspeptic complaints, our author prefers for the purpose of counteracting the usually slow motion of the bowels, a combination of columbo powder with carbonate of potass and a few grains of rhubarb, to be taken once or twice a day. He likewise recommends as tonics the use of sulphate of iron with aloes; the sulphate of quinine with aloes; oxide of bismuth, with rhubarb or aloes; and in particular the nitric acid, which, he observes, is often found one of the best correctors of acidity. Benefit is also derived from the other mineral acids and lime water. He very properly condemns the free use of stimulants, active purging, and the indiscriminate employment of mercury, which last remedy he would only admit of where there appeared to exist some derangement of the liver.

In the various forms of that unpleasant occasional attendant upon dyspepsia, gastrodynia, or pain in the stomach, our author says that he has found nothing of more general utility than the sulphate of iron, in doses of two grains, combined with one grain of aloes, and five grains of aromatic powder, taken three times a day. This of course is not of universal application, for the causes being various, must call for variety in the treatment. A modification of this affection met with in persons of a gouty habit, seems in general to be most relieved by stimulants combined with alkalies and small opiates. He, however, recommends caution to be observed in this course, since the cases may be connected with chronic inflammation or ulceration, when the consequences might be fatal.

Passing by some other troublesome affections introduced under this head, we shall submit a few of our author's observations relative to sympathetic affections of the heart, which assume such various forms, and frequently counterfeit so closely the character of organic diseases of the heart and large blood-vessels, as to create great alarm, and render discrimination very difficult.

“The slightest, and perhaps the most common form consists of a momentary feeling of a rolling or tumbling motion of the heart, like that produced by a sudden surprise or fright, and it is accompanied by an intermission of the pulse. This feeling may be repeated only once or twice at a time, and occur at long intervals; or it may return in rapid succession, for half an hour or an hour together; or it may be felt occasionally at irregular intervals, for several days or weeks, or for a still longer period.”

Various other feelings, such as palpitation, irregular action of the heart, and even dyspnœa are perceived, but we shall proceed to state some of the principal diagnostic symptoms by which these affections may be distinguished from real diseases of the heart. A dyspeptic origin is indicated by the regular and natural action of the pulse and heart during the intervals between the attacks, relief from remedies directed to the state of the stomach, the symptoms being most apt to occur whilst the patient is at rest, and especially after meals, and being relieved instead of increased by active bodily exercise. Our author has given several highly interesting cases of this affection.

Some other disorders, which, from their situation and nature, appear allied to those of the stomach, are described in an appendix to this chapter. Among these are diseases of the œsophagus, and especially the various forms of dysphagia or difficult deglutition. The most frequent causes of this last affection according to our author, are—enlargement of the epiglottis, and diseases of the larynx, generally distinguished by very slight cough and difficulty of breathing.—Paralysis of the œsophagus, generally connected with disease of the brain or spinal chord, characterized by a sudden and complete loss of the power of swallowing, whilst a full sized probang might be passed without difficulty. The cases he observes generally got well soon, and in some of them electricity was extremely beneficial. One patient could not for some time swallow at all, except when he was seated on the electrical stool.—Simple stricture of the œsophagus, generally connected with a thickening of the mucous membrane at a particular spot, without disease of the other coats.—Contraction, with more extensive disease, as thickening and induration of the coats of the œsophagus, frequently combined with ulceration of the inner surface.—Tumours external to the œsophagus,

formed by enlargement of the bronchial glands, or those of the posterior mediastinum.—Polypous tumours growing from the inner surface of the œsophagus itself.—Collections of matter behind this tube, sometimes to an immense extent.—Aneurism of the aorta.—Disease of the cardia.—Morbid irritability of a part of the mucous membrane, probably giving rise to the form rather indefinitely denominated spasmodic stricture.

As the treatment of these numerous forms must be adapted to the various existing causes, the subject would be much too long to introduce here. We shall therefore proceed to another division of our author's book, wherein he treats of affections of the intestinal canal.

The leading pathological principles quoted at some length in the beginning of this article, are to be steadily kept in view during the consideration of diseases of the intestinal canal. The symptoms connected with inflammatory affections of these tissues in the abdomen are an irritable state of the bowels, assuming the characters of diarrhœa, cholera, and dysentery, denoting the mucous membrane to be the chief seat of disease; obstruction of the bowels, showing the affection to be seated in the muscular coat; whilst inflammation may exist in the peritoneal coat alone, and proceed to a fatal termination, the functions of the bowels continuing in a natural state through the whole course of the disease.

Our author considers diseases of these parts under the following divisions or heads: 1. Ileus; 2. Inflammatory affections of the more external parts, including peritonitis and enteritis; 3. Diseases of the mucous membrane. But as these affections are often more or less combined, their consideration must consequently be connected.

He thus describes the first-mentioned disease:—

“Colic and ileus are different degrees or different stages of the same affection, and the name, therefore, may apply to both. The symptoms in the early stages are pain of the bowels, chiefly twisting with great severity round the umbilicus, obstinate costiveness, and generally vomiting; but without fever, and commonly at first without tenderness, the pain on the contrary being rather relieved by pressure. As the disease advances, and if no relief be obtained, the abdomen becomes tense, tender, and tympanitic; the vomiting very often becomes stercoracious, with severe tormina, intense suffering, and rapid failure of strength. In this manner the disease may be fatal without inflammation, or at an advanced period it may pass into inflammation, and be fatal by extensive gangrene.”

He investigates the conditions of the parts affected in the several states and stages of the disease, illustrating the various forms by a series of highly interesting cases, in which both the symptoms and appearances on dissection are detailed. Some of the pathological and



practical deductions drawn from these sources, we shall proceed to state in a summary manner.

“At the earliest period at which we have an opportunity of seeing the condition of the parts in a fatal case of ileus, it seems to consist in a state of simple distention, without any visible change in the structure of the part.”

When life has been prolonged to a rather more advanced period of the disease, a tinge of vivid redness is found on the distended part of the intestine. In another stage, the distended portion presents a leaden or livid colour, without any sensible change of texture, which, however, at a still later period seems to pass into gangrene. All these appearances, our author thinks, commonly have their seat in the muscular coat, and may exist independently of peritonitis, although this may be combined with ileus in its more advanced stage.

As post mortem examinations of subjects that have died of ileus generally show some part of the intestine in a state of great distention, and another empty and collapsed, nearly in the form of a chord, a question has arisen which of these parts was to be looked upon as the true seat of the disease. Some have contended that a spasmodic contraction has occasioned distention of the parts above, but our author, rejecting the doctrine of spasm as applied to this subject, adduces many considerations in support of his opinion that the real seat of disease is in the distended portion, the other being a healthy condition of the bowel.

Some of the practical deductions furnished by Dr. A. are as follows. Pain increased by pressure he does not always look upon as a certain mark of inflammation in the bowels, since various observations have satisfied him that intestine which has become rapidly distended is painful upon pressure, although this kind of pain can by attention generally be distinguished from the tenderness of acute inflammation.

Sudden cessation of pain, and sinking of the vital powers, he thinks, are not necessarily indications of internal gangrene, since he has seen these symptoms existing with recent inflammation, and on the other hand, he has met with cases where there was extensive gangrene, although violent pain continued to the last.

He thinks the pulse a very uncertain index of the condition of the parts in ileus, it having appeared less affected in some cases where signs of considerable inflammation were observable after death, than in others where none were met with.

Ileus, he observes, does not appear to be necessarily connected with feculent accumulation, or with any condition of the contents of the canal, it being sometimes fatal where the appearances are natural, or almost fluid, or in very small quantity. Neither does it appear



to be necessarily connected with obstruction in any part of the canal, since fatal cases occur without, and death has ensued after every thing like obstruction has been entirely removed. He gives a caution against forming a favourable prognosis in ileus from the appearance of feculent evacuations, since these may be dislodged from the lower and healthy portions of the intestine, while the disease above remains unchanged.

The first point Dr. A. recommends to be observed in entering upon the treatment of ileus, is to ascertain by accurate examination whether hernia exists, since this affection may be present without the patient being aware of it, and though so very small as to include only a minute portion from one side of the intestine, may yet, he says, be the cause of fatal disease.

The symptoms to be more particularly kept in view in the treatment of ileus are:—

“1st. Obstinate costiveness with distention of the abdomen, and considerable general uneasiness, but without tenderness or much acute suffering.

“2d. The same symptoms combined with fixed pain and tenderness, referred to a defined space on some part of the abdomen, frequently about the head of the colon.

“3d. Violent attacks of tormina, occurring in paroxysms, like the strong impulse downwards from the action of a drastic purgative; the action proceeding to a certain point, there stopping and becoming inverted, followed by vomiting, the vomiting often feculent.”

In considering the practical application to be drawn from the above classification of symptoms, he discusses the important question, whether the operation of purgatives is advantageous or hurtful in ileus. Some cases, he observes, yield at first to a powerful purgative, whilst in others again, such a course appears highly injurious.

“A large dose of calomel will frequently settle the stomach, and move the bowels; but upon the whole, I think the best practice in general is the repetition at short intervals of moderate doses of mild medicines, such as aloes, combined with hyoscyamus.”

We must confess our surprise at the *mild* prescription of Dr. Abercrombie, having always looked upon aloes as an energetic purgative, acting with particular force upon the large intestines, which it often irritates in a high degree. Viewing this article as only adapted to atonic conditions of the intestinal canal, we would carefully refrain from its use whenever we apprehended a highly irritated or inflamed state of the large intestines. The advantages derived from calomel in ileus we look upon as less equivocal, and are dis-

posed to ascribe them in part or altogether to some peculiar qualities in this metallic preparation, which we have often seen applied to external inflammations with the effect of allaying them. But it must not be forgotten that great inconvenience and danger often arises from the free internal use of calomel, especially when it has been long retained in the bowels. It appears very remarkable to Dr. A. that there are cases of ileus which yield to a full dose of opium after the most active purgatives have been tried in vain. Now, to us, this fact does not seem at all inexplicable, since we have witnessed over and over again from the external application of solutions of opium, the most speedy effect in soothing and allaying inflammatory affections of the mucous and other tissues. Why may not both opium and calomel be as useful in allaying inflammation when seated internally as when existing externally.

The other remedies on which our author places reliance are, blood-letting, which should be resorted to in every case of ileus, unless distinctly contraindicated by the age or habit of the patient, the relief being often so immediate that there is scarcely time allowed to tie up the arm, or get the patient out of bed before complete evacuation takes place.—The tobacco injection, administered at first with extreme caution, perhaps not more than fifteen grains, infused for ten minutes in six ounces of boiling water, repeated if necessary in the course of an hour, in the quantity of twenty grains, and so on till slight giddiness and muscular relaxation take place. These precautions observed, no unpleasant effects need be apprehended. With this treatment he recommends the conjoined use of “*mild* purgatives, such as aloes and hyoscyamus, repeated in full doses every hour or two.” It would, we think, be easy to find some really milder purgative as a substitute for the aloes.

Opiates, he considered most applicable to cases characterized by paroxysms of violent tormina. If in such cases there be a frequency of pulse, and fixed pain or tenderness, a full bleeding, followed by an opiate, seems the best mode of treatment, the mildest means being afterwards generally sufficient to move the bowels.

When the system begins to be exhausted in the advanced stages, Dr. A. recommends as proper stimulants the aloetic wine, given in full doses of one or two ounces, repeated about every hour. The tincture of aloes may likewise be given in the same manner. Nor is the tobacco injection to be omitted even at this late period of the disease.

The other remedies he mentions are, the application of cold, either by dashing cold water upon the legs, the continued application of it

to the abdomen by means of wet cloths or cold injections:—The warm bath, previous to the occurrence of inflammatory symptoms:—Crude mercury in doses of one or two pounds, he says he has repeatedly used with the effect in some cases of allaying the vomiting, which appeared to be its only operation:—The forcible injection of a large quantity of fluid to the amount of six or eight pounds:—Large blisters over the abdomen:—Oil of turpentine applied externally and by injection. From the favourable termination of many cases deemed desperate, he recommends a steady perseverance in the medical treatment, notwithstanding the most unfavourable appearances.

In the general division of our author's treatise, the second part is devoted to inflammatory affections of the more external parts of the intestinal canal, including peritonitis and enteritis, and as a prelude to their consideration, he advances the following positions:—

1. Intestinal inflammation may be confined to the peritoneal coat, and run its course without interrupting the muscular action of the canal.
2. The inflammation may affect the peritoneal and muscular coats at once, in which case there will be the symptoms of peritonitis, combined with obstruction of the bowels, constituting the disease to which we give the name of enteritis.
3. Inflammation may be entirely confined to the mucous membrane, producing a train of symptoms altogether different from those which occur in the preceding cases, with a disease often running its course to a fatal termination, without any affection of the other coats. The inflammation may, however, spread from structure to structure, so that simple peritonitis shall pass into enteritis, whilst another affection beginning with diarrhœa or dysentery, may afterwards terminate by inflammation of the other coats.

From numerous cases, which he details for the purpose of illustrating the pathology of this class of diseases, he draws the following practical conclusions:—

“1. Extensive and highly dangerous inflammation may exist in the intestinal canal, without obstruction of the bowels; and it may go on to a fatal termination, whilst the bowels are in a natural state, or easily regulated by mild medicines, through the whole course of the disease.

“2. No diagnosis can be founded in such cases on the appearance of the evacuations. These may be slimy, and in small quantity; they may be copious, watery, and dark-coloured, or they may be entirely natural.

“3. Extensive and fatal inflammation may be going on with every variety in the pulse; it may be frequent and small; it may be frequent and full, or it may be little above the natural standard through the whole course of the disease.

“4. Extensive inflammation may go on without vomiting, and without con-



stant pain; the pain often occurring in paroxysms, and leaving long intervals of comparative ease.

“5. Keeping in view these sources of uncertainty, our chief reliance for the diagnosis of this important class of diseases, must be on the tenderness of the abdomen. This symptom should always be watched with the most anxious care, whatever may be the state of the bowels, or of the pulse, or the actual complaint of pain; and though the tenderness itself should be limited to a defined space of no great extent; for we have seen that with every variety in these respects, a disease may exist of a very formidable character, and be advancing to a fatal termination. A certain degree of pain upon pressure we have found attending a merely distended state of the intestine; but this differs from the acute sensibility of peritonitis in such a degree that an attentive practitioner can in general have no difficulty in making the distinction. When the tenderness exists without distention, as is frequently the case in the early stages of peritonitis, there can be no difficulty in the diagnosis.”

Without entering into a particular description of the symptoms attending upon peritonitis and enteritis, we shall briefly refer to a few of the diagnostics noticed by Dr. Abercrombie. A leading peculiarity in peritonitis is that the bowels are not obstructed, being either natural or easily moved by mild medicines; but these evacuations are not attended with the relief expected. The pulse is commonly less affected in the early stages than it is in enteritis, being perhaps from eighty to ninety or ninety-six, and oftentimes little above the natural standard. Peritonitis also differs from enteritis, in having the pain occurring in paroxysms, and in the absence of vomiting. These symptoms relate only to the early stages, for as the disease advances, the pain becomes more fixed, and the usual characters of enteritis make their appearance.

Enteritis differs from simple peritonitis chiefly in being attended with vomiting and obstinate obstruction of the bowels. The pulse is in general more frequent and small, and the pain more violent and constant, often resembling the tormina of ileus. This, however, our author tells us is not invariably the case; enteritis being on the contrary, sometimes chiefly characterized by fever, with urgent vomiting and obstruction of the bowels, and tenderness of the abdomen, but without much complaint of pain.

From his general outline of the treatment of intestinal inflammation, we shall make a few extracts. Blood-letting, which, in accordance with the general opinion, he considers the most important of the general remedies, he recommends to be pushed to a great extent in all cases of active inflammation at an early period, and further advises in all urgent cases, that full bleedings be followed up by small



ones repeated at short intervals, when the effects of the others begin to subside. "The inflammation of a vital organ," says Dr. A. "should not be lost sight of above an hour or two at a time, until the force of it be decidedly broken; and, unless this take place within twenty-four hours, the termination must be considered as doubtful."

Our author regards purgatives in enteritis as hurtful, if administered before the inflammation has been subdued, and states that he has seen their action immediately followed by a renewal of the inflammatory symptoms. That they may and do act under these circumstances as irritants we fully believe, as may be inferred from what we have already said relative to their use in ileus. Independent, therefore, of the difficulty of making them remain on the stomach, we look upon purgatives as forming quite a secondary part in the treatment of acute enteritis. When called for in the latter stages of the disease, the very mildest should be preferred, not only from their occasioning the least irritation, but from their usually operating more promptly and efficiently than those of an active kind. Mild injections are highly useful auxiliaries.

In cases where, after the inflammatory symptoms appear to have been subdued, the pulse has continued frequent, Dr. A. says the digitalis may be given very freely with much advantage.

Before concluding our remarks upon intestinal inflammations, we shall notice an affection frequently attending upon them, namely, tympanitis. This may occur in the early stages of enteritis, from a temporary derangement of the muscular action, and may subside along with the inflammation. But at a more advanced period of the disease, it must be looked upon with much anxiety; for if it occur before the inflammation is subdued, it is generally a fatal symptom, denoting a complete loss of the tone of the bowels, and the existence of extensive adhesions. Tympanitis may, however, exist after the inflammation has subsided, from a mere partial loss of tone, in the intestinal coats, and under these circumstances the patient recover. The treatment recommended for this affection by our author, consists chiefly in the administration of small quantities of wine or brandy at short intervals; gentle compression and friction of the abdomen; injections of beef-tea; to which may be liberally added bark or sulphate of quinine, turpentine, tincture of assafoetida, and a moderate quantity of laudanum. These should be repeated every two or three hours. Laxatives are to be used with caution. He recommends for this purpose the aloetic wine. That most formidable affection which has been called the true tympanitis abdominalis, can scarcely be considered as under the control of medicine, arising as it does from per-

foration of the intestine and the escape of flatus into the peritoneal cavity.

As the inflammation in peritonitis sometimes assumes erysipelatous characters, Dr. A. has made this form the subject of a distinct chapter. In a pathological point of view, he considers the chief feature of this affection its termination ordinarily by effusion of fluid, without much, and often without any of that inflammatory and adhesive exudation, so characteristic of the more ordinary forms of peritonitis. The effused fluid is sometimes a bloody serum or sanies, occasionally mixed with a little pus, which subsides to the bottom of the vessel when the fluid is left at rest. In other cases it is milky or whey-coloured, or contains shreds or flaky matter. Occasionally it has all the characters of pus.

This affection is remarkable for the rapidity with which it runs its course, a sudden sinking of the vital powers sometimes occurring at a period so early as to prevent the adoption of any active treatment. It is frequently associated with erysipelatous affections of other parts; and Dr. A. speaks of its appearing as an epidemic. He thinks that when erysipelatous inflammation attacks internal parts or organs, it assumes characteristics decidedly different from common acute inflammation of the same parts. Women in the puerperal state are, he observes, liable to two distinct forms of peritonitis, which have not been sufficiently distinguished from each other. These are, acute peritonitis, presenting the usual symptoms, and another form, in which the symptoms are more insidious, and accompanied from an early period, by great prostration of strength, and fever of a typhoid character.

Chronic peritonitis Dr. A. thinks of more common occurrence than persons not familiar with pathological investigations generally suppose. He views it as a disease of the most insidious and dangerous character, the symptoms being extremely obscure. To be treated with any chance of success, the utmost attention must be paid to its earliest indications, for which we refer to our author's treatise, where a number of cases illustrative of the disease may be found. The treatment recommended consists chiefly in the repeated employment of free topical bleeding, blistering, confinement, rest, antiphlogistic regimen, and the mildest diet.

We come now to the portion of our author's work which treats of inflammatory affections of the intestinal mucous tissue, and shall insert a few of the practical conclusions which he has drawn relative to the principal diseases affecting this structure.

"1. Active inflammation of the mucous membrane, which varies considera-

bly in its characters, according to the extent and seat of the disease. It may be fatal in the inflammatory stage, by gangrene, by ulceration, and by passing into peritonitis.

“2. Chronic diseases of the membrane. This may supervene upon an acute attack, or may come on in a gradual and insidious manner without any acute symptoms. It generally goes on for a length of time, and is fatal by gradual exhaustion. Upon dissection it shows fungoid disease of the membrane, ulceration of various characters, or thickening and induration of all the coats of the intestine. It may be fatal more suddenly by perforation of the intestine and rapid peritonitis.”

Among the acute inflammations of the mucous intestinal coat, dysentery is the form most prevalent and fatal in this country, where, however, as in other places, it is often attended with little danger: Accompanied with fever, constitutional disturbance, or vomiting, the disease, our author very properly informs us, is to be watched with much attention. When limited, as it is in a large proportion of cases, to the rectum or lower part of the colon, there is generally little danger to be apprehended, but if it be attended with pain and tenderness extending above the pubis, in the course of the ascending colon, the case must be looked upon as more precarious. If this tenderness, along with tension, extend into the epigastric region, there will be reason to apprehend an affection of the arch of the colon, which will make the case still more alarming. The danger may be considered extreme when there is ground to believe the whole course of the large intestine affected, chiefly, we suppose, from the violent constitutional disturbance that ensues.

In colonitis and tropical dysentery the disease extends through the whole of the colon, or through a considerable part of the small intestines, attended with copious discharges, at times, of thin healthy feces, varied occasionally by mixtures of morbid discharges, and by articles of food or drink little changed. In that most rapid and fatal disorder, Indian cholera, there is reason to believe a much more extensive affection of the intestinal canal, embracing the largest portion of the lining membrane not only of the great, but of the small intestines. In this last-named disease, inflammation of the mucous tissue is supposed to exist in its very highest form.

From the chapter devoted to the treatment of acute inflammations of the mucous membrane, we extract the following observations applied to dysentery. Dr. A. agrees with most practitioners of the present day, in respect to the great importance of general blood-letting in the early stage. He likewise thinks much benefit is to be derived from the application of leeches either to the abdomen, or, when the disease is seated in the lower part of the bowels, to the verge



of the anus. Blistering, diaphoretics, and the antiphlogistic regimen are all recommended. To quiet the general irritation, and also as a diaphoretic, he prefers Dover's powder, or ipecacuanha, in doses of one or two grains, three or four times a-day. James's powder, which is frequently prescribed for the same purpose, he objects to, upon the ground that in all inflammatory affections of the mucous membrane of the intestines, the effects of antimonial preparations are equivocal. He mentions a great variety of remedies that appear useful in a more advanced stage, after the inflammatory symptoms have been subdued, such as cusparia, lime water, oxide of bismuth, nitric acid, sulphate of alum, logwood, balsam of copaiva, acetate of lead, either administered alone or variously combined; as, for example, a strong decoction of cusparia with nitric acid and laudanum, oxide of bismuth with cusparia and Dover's powder. Nitric acid combined with opiates he thinks may be administered with advantage even in the early stages. He likewise speaks favourably, from his own observation, of charcoal given in combination with Dover's powder. The most useful injections, he thinks, are mucilaginous articles, or thin arrow-root, with an opiate, and infusion of tobacco, or of ipecacuanha, in the early stages, and after the subsidence of the urgent inflammatory symptoms to relieve the tenesmus, lime water, diluted at first with equal parts of milk or thin arrow-root, and with the addition of an opiate.

He does not look upon purgatives as forming a regular or essential part of the treatment of dysentery, but advises the occasional use of the mildest laxatives, more for the purpose of obviating the bad effects from feculent accumulations, than to act directly upon the disease. We think his views upon this subject highly judicious, and believe the very common practice of forcing the bowels into constant and inordinate action, by means of various cathartic medicines, very often extremely injurious, by aggravating and extending the existing inflammation. They are supposed to have the effect of checking the unnatural secretions, and changing the appearances of the evacuations, but it cannot be doubted that they too often increase these by adding to the morbid irritation or inflammation upon which these circumstances depend. We fully agree with our author in believing that the use of purgatives in dysentery demands much discretion.

In the chronic forms of disease in the mucous membrane of the intestinal tract, the treatment is acknowledged by our author to be "precarious," and the list of remedies which he mentions as appearing generally useful, afford abundant evidence that it is so. These are, lime water; vegetable bitters and astringents, especially cusparia and logwood; preparations of iron; small quantities of mercury with



opium, especially calomel with Dover's powder, or small doses of calomel with opium and ipecacuanha; the resins, as turpentine, balsam of copaiva or tolu, with small doses of opiates; sulphur with opium; nitric acid; various combinations of these remedies with each other. Again, repeated blistering on the abdomen is often very beneficial, as is also bandaging with a broad flannel roller, and the tepid salt water bath. He thinks from various trials of the medicine, that he has seen advantage result from the sulphate of copper lately recommended by Dr. GRENVILLE in various protracted affections of the bowels. The doses mentioned are at first half a grain, combined with an equal quantity of opium, which may, if necessary, be increased gradually to the extent of three grains with half a grain of opium, three times a day. In all affections of this kind, most rigid attention must be paid to diet. Animal food appears hurtful in every form, and the best substitutes for it are the various farinaceous preparations.

We are compelled to pass over some other morbid affections of the abdominal viscera, noticed in the last pages of Dr. Abercrombie's extensive treatise, our analyses having already reached beyond the limits originally proposed. Satisfied with placing before our readers those observations and conclusions which bear most immediately upon practical points, we have waived discussion as far as possible, even where so many occasions inviting it presented. The whole space allotted to this article would have been much too small for the arguments upon the single question, whether inflammation of the gastrointestinal mucous tissue be the primary source of all fevers, as maintained by BROUSSAIS and others, or whether such inflammation is not of secondary origin.

G. E.

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ART. XIV. *A Practical Treatise on Parturition, comprising the Attendant Circumstances and Diseases of the Pregnant and Puerperal States.* By SAMUEL ASHWELL, Member of the Royal College of Surgeons, and the Medico-Chirurgical Society of London. To which are appended two Papers, the one containing some Remarks on Abdominal Surgery, the other on Transfusion; presented by Dr. BLUNDELL, of Guy's Hospital. London, 1828, pp. 546, 8vo. with 13 plates.

THIS work does not pretend to originality; it must be looked upon only as a manual of uncommon size. The author has borrowed liberally and judiciously from all the more recent English works upon the subjects

on which he treats; but rather too often, perhaps, without acknowledgment. There is but too little evidence of the author being an old and extensive practitioner of midwifery; and the "getting up of this work," must have had a sinister object; for his own experience, at least as far as can be determined by the practical value and bearing of this work, does not appear to justify its publication. We are not sufficiently acquainted with the London modes of getting into business, to make a very positive assertion upon the subject, yet we strongly suspect from this, and many other works of modern date, that "making a book" is one. It was not so formerly; for, "O! that mine enemy might write a book," was the impassioned expression of the wisest of men—but with the motive for publication we have nothing to do—it is certainly well "got up;" though its price is most unnecessarily enhanced by the introduction of SMELLIE's plates, as these plates utterly fail to answer the purposes for which they are intended; no drawings indeed, however ingeniously designed, or elaborately executed, can aid the student in the application of the forceps in the slightest degree. Besides, the two first plates do not represent the objects intended, at least not as they should do—but more of this by and by.

We however acknowledge with pleasure, that the principles he has adopted are generally correct; and the practice arising out of them, is for the most part unexceptionable. We also admit, that the work is modestly written; and is free from parade, or pedantry, as well as from misleading speculations.

Mr. Ashwell commences his work, according to usage, with a brief history of midwifery; as this occupies but four and twenty pages, much of interesting detail cannot be expected. He divides his subjects into four parts; in Part I. he treats of the "Obstetric Properties of the Pelvis; carefully noticing those Deviations which may obstruct Parturition."

In Chapter I. of this division, he considers the composition of the pelvis; the separation of its bones; its relation to the practice of midwifery; its deformities; the soft parts contained in it; and the mode of ascertaining its diameters. He is very concise on this part of his subject—which is no great error perhaps; for, as regards the healthy anatomical construction of the particular bones constituting the pelvis, little, or nothing new or interesting, can be said. But not so when either may be in a state of disease; as a slight deviation from a proper conformation, may very materially influence the mechanism of labour and the mode of terminating it.

We think that Mr. A. has given too much importance to the state of union between the coccyx and sacrum, when that joint *alone* is not

enjoying its natural or healthy powers, and from which a serious practical error may result. He says that the "anchylosis of this bone is of rare occurrence; and still more rarely produces any serious obstruction to parturition. We have, however, seen one case, in which the birth of the child was much retarded by the encroachment of this bone on the capacity of the inferior outlet of the pelvis." For when this part *alone* is in an unhealthy condition, all other things being equal, it can never cause any serious inconvenience, though it may perhaps create some delay in the progress of the head; for, as BAUDELOQUE very justly observes, that when the consolidation of this bone with the sacrum obstructs delivery, "it is only in women who have also narrow pelves." We should not have stopped to notice this point, did not the belief of the consolidated condition of the coccyx lead to error in practice. We once knew this part fractured, by a practitioner who had adopted this notion, by introducing his finger into the rectum, and forcing the coccyx too far back—a very tedious and painful convalescence followed; the patient could not sit, but upon an open seat, for many months after this ill-judged interference.

We find nothing worth remarking upon in the other sections of "The Obstetric Properties of the Pelvis;" though the young practitioner may find some good practical remarks under the head of deformity of the pelvis; and some important cautions will suggest themselves in reading the case of the lady, who had several children destroyed by the perforator, and who was several times after, delivered without extrinsic aid, of living children.

Chapter II. is occupied by the description of the child's head; both in its natural dimensions, and where it is beyond the standard measurements. As there is nothing new in this chapter, we shall not attempt to analyze it.

Part II. comprises menstruation; the description of the gravid uterus, with the doctrines of conception, sterility, and the signs and diseases of pregnancy.

In treating of menstruation, he refers the reader to works of anatomy for the organ that produces it. He says, "we do not pretend to throw any new light on the causes of this periodical discharge." He looks upon the menstrual fluid as differing from the common blood in several particulars, as in colour, chemical analysis, constant fluidity, and its power of resisting putrefaction. He says, "the catamenia are invariably suppressed in pregnancy;" this is by far, too sweeping a declaration, if our experience avail us any thing.

When there is an entire failure in the appearance of the catamenia,



"nature," Mr. A. says, "almost invariably attempts to remedy the misfortune by setting up some other evacuation, which in a measure supplies the place of the proper one, as far as concerns their health. In some we find a periodical discharge from the nose, from the anus, from the puncta lachrymalia, from the ears or the nipples; and BAUDELLOCQUE knew a woman of seven or eight-and-forty, who from the age of fifteen, had been regularly attacked every month by a vomiting and purging, which lasted three or four days. She never had the catamenia," p. 96. Cases of the entire want of the catamenia are certainly very rare—we have known but two instances; but in neither of these, did any compensating discharge take place, nor can we see the necessity in such instances; as in some, certainly, and in all, most probably, there existed defective organization; either the uterus or ovaries were wanting, or they were deficient in structure, or in development at least. Here there could be no necessity for the catamenial discharge, as the animal was not to profit by it; and it cannot be a *sine qua non* to health, since in both the instances just mentioned, the females enjoyed a very fair proportion of it. Not so, however, we are taught to believe, when this discharge has been accidentally interrupted; in such cases we hear of vicarious functions being instituted, though we have never in a single instance witnessed such a transfer of action. Nor is there any thing more remarkable in the case quoted from Baudelocque, than in the periodical appearance of hæmorrhoides in men; coincidence we believe must account for that phenomenon in Baudelocque's patient.

On the derangements of the catamenia, we find nothing novel or interesting.

Chapter II. is bestowed upon the "Gravid Uterus, with the doctrines of Conception, Sterility, and the Signs and Diseases of Pregnancy." On the subject of the condition of the uterine parietes during gestation, he does not appear to have made up his mind distinctly whether they become thicker or thinner; at least he says, "we are not aware of any facts which enable us to speak with absolute certainty on this point, as there are in the obstetric museum at Guy's Hospital, four preparations of the pregnant womb which demonstrate its thickness and thinness in an extraordinary degree." We are not informed of the circumstances connected with these "preparations," and which would be absolutely necessary, were conclusions to be drawn from them, as the four may have been in morbid conditions. The unusual thickness on the one hand might be owing to serous depositions from previous inflammation; while on the other, the extreme thinness may have been caused by an excessive flooding—in neither



case, therefore, could they be adduced as instances of the ordinary, or healthy œconomy of the uterus.

Mr. A. however, with the intention of proving, that in certain cases this great tenuity of the uterine parietes takes place, says that—

“A professional friend mentioned to me the following singular and interesting case:—A lady of delicate fibre who had borne several children, slipped off the pavement, but did not fall, in the last month of pregnancy. Acute pain was immediately felt in the uterine region, and when examined by a very experienced surgeon, so plainly were all the parts of the fœtus felt through the abdominal coverings that he did not hesitate to believe that the uterus was lacerated, and that the child had escaped into the abdominal cavity. In a few days, however, she was safely delivered “*per vias naturales*,” of a healthy child, thus plainly showing, in this instance, the extreme tenuity of the uterine parietes.”

We have seen in very delicate and emaciated women, the same kind of “*tenuity*” spoken of by Mr. A. that is, where almost the whole form of the fœtus could be traced, and portions of the limbs occasionally so prominent as to almost excite the belief, that they might be seized through the abdominal and uterine parietes. In these cases, however, there was but a moderate distention of the uterus, and no great abundance of liquor amnii. Yet all this does not prove a *preternatural* “*tenuity*” of the uterus; for so long as gestation advances healthily; that is, so long as the fœtus is regularly developed and nourished, the uterus must have its proper quantum of blood; and if this be so, its parietes will necessarily be of proportionate thickness; a circumstance of considerable consequence to its future action. This is abundantly proved by the loss of power the uterus sustains, when it is deprived of much blood, as in flooding cases. We see nothing more in this chapter to challenge our attention, or to elicit farther remark.

Chapter III. (by mistake called Chapter II.) treats of “*Conception and Sterility*.” The author dismisses these subjects very soon; the former he treats with great brevity considering the strong temptations it holds out for ingenious, but perhaps unprofitable, speculation; on the latter he bestows but a few lines, notwithstanding its great importance in a pathological point of view. He makes sterility depend upon four principal causes; namely, 1, too early marriage; 2, ill health; 3, too frequent sexual intercourse; and 4, dysmenorrhœa.

The first of these causes does not appear to operate in this country to the end supposed. The second, unless the uterine system is implicated, rarely prevents conception. The third is an extremely

doubtful cause, since it would be difficult to define what degree of frequency of sexual intercourse, would constitute the cause of failure. "The effect of frequent intercourse in inducing sterility," Mr. A. says, "is obvious from the case of prostitutes, in whom it is said, the fallopian tubes contract adhesions with the contiguous parts of the peritoneum."

To us, this cause is very far from being obvious; first, because all are not barren. Second, because they escape *labours* by procuring *abortion*. Third, because the greater part are particular to wash the parts after intercourse, which may aid in the immunity from conception. Fourth, because it remains to be proved, that the fallopian tubes more frequently contract adhesions in wantons, than in modest women—that it has been more frequently observed in them, is every way probable; because they become very much more frequently the subjects of observation. Fifth, because these adhesions would not necessarily be fatal to conception, unless both tubes were thus circumstanced.

Chapter IV. is devoted to the "Signs and Diseases of Pregnancy." In this chapter the author successively treats of the affections incident to impregnation; or what Baudelocque calls the rational signs of pregnancy. But we find nothing to arrest us here.

Part III. is devoted to "Labour in all its Varieties." He divides labours into three classes. Class I. Natural labour. Class II. Difficult labour. Class III. Flooding labour.

"Annexing, as *exceptions* to natural labour, those *complicated* and anomalous circumstances which have generally constituted a distinct class." p. 220.

We are by no means certain that we comprehend the above sentence, we shall therefore pass it without remark.

"Class I.—Natural labour, may be defined, that which is occurring at the full time, the head of the child presenting, and the process being completed within twenty-four, or twelve, or frequently within six hours, without artificial aid, or the occurrence of any morbid affection. This comprises three orders."

"Order 1. Quick labours, occurring by far the most frequently, in which the process is easily completed within the prescribed time."

"Order 2. Lingering labour, the head of the child still presenting, but continuing beyond twenty-four hours, instrumental aid *not* being required."

"Order 3. Twin labour."

"Class II.—Difficult labour, or those in which the child may or may not present the head, and where the natural powers are generally insufficient to accomplish the delivery. This comprises three orders."

"Order 1. Presentation of the breech, of the superior or inferior extremities, or any combinations of these presentations, and which require *manual* aid."

“Order 2. Labours which cannot be completed *without the aid of extracting instruments*, of which some are designed to save the lives of both mother and child; while others are intended to preserve *the life of the mother*, at the expense of the life of the child.”

“Order 3. *Impracticable labour*, or that in which the child, even when as much as possible reduced in size, cannot pass through the pelvis, and where the *Cæsarian* operation becomes necessary.”

“Class III.—*Flooding labour*, including the *earlier and later hæmorrhages* attendant on gestation as well as parturition.”

We have given Mr. A.'s classification entire, which it will be perceived, differs but little from the classifications of almost all the British writers, and consequently liable to the same general objections; namely, too much complication, in its general and detailed structure, and making portions of time essential to particular classes of the division. But every gentleman is entitled to his own notions upon this point; and perhaps no very serious injury will result, so long as his definitions are clear, and his exceptions well marked and accurately limited.

We very much prefer the classification of Baudelocque; it is much more natural as well as more perspicuous, as it embraces every possible variety of labour, without the risk of either the cases or orders being confounded. Besides it is much more easily understood by beginners, and is much less embarrassing to young practitioners. The propriety of making the presentation of the head essential to a natural labour, is very questionable; as its practical tendency may be highly injurious; for this part has its good, and its bad positions. But with the ill instructed practitioner all are alike, and the case is permitted to proceed even to the exhaustion of the woman and the death of the child, because it is a “natural labour,” agreeably to definition.

Thus, it is the head which presents, in that very embarrassing case, where the chin leaves the breast in the beginning of labour, and would constitute from the head presenting, a natural labour, and more especially, if the woman can deliver herself within twenty-four hours, though this may be at the expense of the child's life. In this case, the judicious interference of the accoucheur may save many hours of severe suffering to the woman, and preserve the life of the child; but this interference would immediately confound the classes of labour, which would be a high crime and misdemeanor; since we are directed to do nothing in a “natural labour.” The face is also a portion of the head; and the woman may struggle through the difficulties created by its particular position within twenty-four hours if left to herself; though it might be highly advantageous, and certainly agreeable to the best rules of practice, if a matured judgment decide, that



the woman shall not be subjected to such severe penalties, for the sake of definition.

Indeed the author himself seems to concede this point, when he says—

“It is of extreme importance that the mechanism of natural labour, or rather the *precise course taken by the child's head* in passing through the bony canal of the pelvis should be well understood; as it will be vain to expect the efficient management of a bad presentation of the head, when its simplest and most natural mode of transition is imperfectly known.” And very judiciously adds, “We are well aware, that many practitioners deem this knowledge superfluous, as if the head do present, they trust implicitly to the natural powers for its delivery, thus not unfrequently condemning their patients to hours of suffering, which a slight acquaintance with the principles on which natural parturition is conducted, would have been amply sufficient to prevent.” p. 236.

We are persuaded that much practical advantage is derived from the classification of Baudelocque, since it is altogether conformable to truth; that in all labours where the woman can deliver herself, as when the head, breech, feet, or knees present, are natural. And when she is not able to do so, that they are then preternatural; for either of these presentations may be essentially, or accidentally bad, and require assistance; for the particular presentation of the part itself may from mere peculiarity of position, require to be interfered with, as, for instance, the third and sixth of this author's head presentations; and the fourth of either of the breech, feet, or knees. Besides, the young practitioner finds much comfort, when he encounters a presentation of either the breech, feet, or knees, after he has been taught that these are ranged under the head of natural labours; and is thus prevented from unnecessary, if not from dangerous interference, to which he would be tempted, if he had been taught they were preternatural.

Mr. A.'s first order of Class II. appears to us to be particularly exceptionable; it confounds the presentations of the breech, feet, and hands, notwithstanding the essential differences of the mechanisms of labour, of the superior and inferior extremities; and as he directly asserts, that they all require “*manual aid*.” Now it is a fact every way notorious, that the labours in which the breech and feet present, will sometimes be terminated with as much speed as success by the unaided efforts of the uterus, while those in which an arm may offer never terminates spontaneously; unless, indeed, it be insisted, that the tardy and uncertain movement called “*spontaneous evolution*,” is an exception.

We are a little at a loss to comprehend the following sentence,



though from the manner in which it is introduced, it seemed to be considered of consequence by the author. "It is a rule in midwifery to see a patient about to be confined, as early as possible; for there may be a preternatural presentation; and from the rupture of the membranes and the escape of the waters, the favourable moment for turning may be lost, previously to the arrival of the accoucheur," p. 229. Does Mr. A. mean that the membranes must necessarily be ruptured before the patient is seen by the accoucheur? This cannot be, yet what other construction can be given to it.

The author proceeds to make a number of practical, but well-known remarks upon "the changes immediately previous to parturition, delivery," &c. but as nothing new or striking present themselves, we shall pass by them, until we come to his description of the mechanism of a natural labour.

He illustrates "the most common presentation" by Plate I. to which he refers. This plate is extremely faulty, and were a young practitioner to form his opinion of the situation of the head at the superior strait from it, he would be very much deceived. The following are the faults we perceive in this representation. First, The angle of the opening at the superior strait is much too great. Second, The head does not enter in the direction of this angle, for the centre of the head corresponds with the superior margin of the symphysis pubis; the body of the child is completely vertical, and instead of the head being engaged in the upper strait obliquely forward, it is made to rest obliquely backward. Third, In this presentation of the head, (the first of Baudelocque,) the right parietal bone should be deeper in the pelvis than the left, but the contrary is represented by the plate. Fourth, The left ear is more within reach than the right; the reverse of this should be the case. The second plate is faulty, inasmuch as it should have represented the same presentation in progress; whereas it is an advanced stage of the second presentation; the third plate is good.

We cannot agree with the author in the following declaration:—"Cramps, which are occasionally arising from pressure on the obturator and sciatic nerves are favourable, inasmuch as they indicate the rapid descent of the child through the pelvis." p. 249. The contrary of this is most consonant to our observation, and also to truth, and for this plain reason, that in the more rapid labours, there is less friction between the head of the child and the lining of the pelvis; and consequently, the head is less liable to impinge upon the sacral nerves, than if it occupied the pelvic space with entire strictness. For these cramps do not take place until the face, or hind head, is about to

sweep into the hollow of the sacrum, and they are never so bad as when the head finds some difficulty from want of room in making this turn.

Mr. A. says, "a diversity of practice has obtained in the management of the membranes; some practitioners invariably leaving their rupture to the natural efforts, while others as invariably break them by artificial means, so soon as they are within reach, and before the dilatation of the os uteri is fully accomplished. Of the latter practice we do not approve; the rule should be, to leave their rupture to the natural efforts." We cannot but severely condemn the first plan, as it may very often occasion both delay and difficulty; nor can we approve of the author's regulation upon this point, as we are certain when it is strictly followed, it occasions much unprofitable delay, as well as creates a risk of subsequent evils—flooding, and retention of the placenta. Our habit for very many years is, to rupture the membranes whenever the os uteri is sufficiently dilated or easily dilatable; nor have we ever had reason to repent of this practice. By it, we are almost certain to procure more powerful contractions of the uterus, and prevent delay in the throwing off of the placenta. On the whole, the subject of natural labour is treated with judicious care.

"Order 2. Lingering labours; the head of the child presenting, but continuing beyond twenty-four hours, instrumental *aid not* being required." It is truly difficult to account for the lapse of twenty-four hours, being a period by which the character of a labour is to be distinguished; hours should never alone govern our conduct, as to the choice of means to terminate a labour. We have very often seen a necessity for manual, or even instrumental interference necessary, very much within the period of twenty-four hours; and much oftener have we witnessed cases terminate happily without extrinsic aid, that were protracted very much beyond the period of twenty-four hours. In midwifery, time should never be the guide; it is no principle in itself, nor can it possibly create one by which we should be governed; circumstances alone should regulate our conduct; and if these be well understood, and carefully weighed, we shall rarely err.

Had our author entertained similar sentiments, he would not, we think, have managed the following case as he declares he did.

"I was lately called to a case, and requested by the accoucheur to use instruments, where the patient had been in labour forty-eight hours with her first child; the parts had been rigid, and sixteen ounces of blood had been early abstracted; *the head had been for many hours resting on the perinæum, and the pains were ineffective and at distant intervals.* I encouraged the patient to hope for a safe delivery, ordered some solid nourishment and port wine negus; and

in three hours the labour was safely completed, *although the child was dead.*" p. 267.

We have italicised a part of this history, and we would ask why the forceps were not used as recommended by his more judicious companion under the circumstances thus marked! And we would farther demand, what other than a dead child could he promise himself after it had been so unnecessarily long delayed in the passage? This case illustrates any thing but sound practice.

Our author's remarks upon the use and powers of the ergot, are but mere reiterations; and his condemnation of blood-letting in cases of rigidity of the soft parts, are entitled to no weight, as he never appears to have adopted it, either to the extent, or under the circumstances for which it has been recommended. He says, "we cannot perceive that Dr. DEWEES has thrown any new light upon the subject; he has certainly recommended larger abstractions of blood, (a practice previously enjoined by MAURICEAU to a moderate extent,) than we should feel disposed to adopt, unless the *rigidity was extreme, the pulse very full and frequent, and the general tendency to inflammation and fever marked and decided.*"

The whole of this passage is remarkable for its incongruity and discrepancy. First. The author would insinuate, that *extensive blood-letting* had long since been recommended by Mauriceau, in cases of unusual rigidity; yet he instantly destroys his own assertion by declaring, that it was "to a moderate extent." Now, a large bleeding, and a small bleeding, are two distinct remedies in the cases under consideration; for the latter exerts no appreciable influence upon the parts intended to be relieved by it; while the former is certain, to produce the relaxation, so much desired.

Second. He confesses he would employ this remedy in cases where the "rigidity was extreme, the pulse very full," &c. now, is this not the very case, and conditions, for which a bold use of the lancet is recommended by Dr. Dewees? In what then does Mr. A. and Dr. D. differ? Certainly in nothing; for he adds immediately after, "we trust we should never hesitate to adopt the boldest and most vigorous treatment, when absolutely required." Dr. D. never does more, nor even that, but when it is "absolutely required." His fears for the patient after the loss of "thirty, forty, or even fifty ounces" of blood, are entirely groundless; for we have many times drawn that quantity under the circumstances just stated, and we can most conscientiously declare, we have never witnessed the smallest evil result from it.



The section of "Twin Labour" contains nothing that need detain us a moment. On the subject of "Complications of Natural Labour," our author seems to think he has improved the classification of labours by uniting the accidents incident to parturition, with the consideration of natural labour. He says—

"We are aware, that in associating these anomalous and complicated events with natural labour, we deviate from the course generally pursued, a distinct class having been assigned them. This arrangement, however, appears capable of improvement; for as all these occurrences may happen where the presentation is natural, it is certainly more simple, and perhaps more correct, to subjoin them to this order of parturition." p. 285.

He divides these affections into two classes:—

"First. Those which are remediable by proper treatment, and which less seriously involves the safety of the patient and her offspring; and, second, those which from the moment of their appearance are replete with danger, and which, notwithstanding the most able treatment, compromises the safety of both the mother and the child. In the first class we comprise obesity; syncope, not dependent on hæmorrhage from the uterus; rigors, vomiting, and fever. Hæmorrhage from any part except the uterus; obliquities of the uterus; distended or prolapsed state of the bladder. Prolapsus ani; œdema of the cervix of the uterus, and sanguineous or lymphatic infiltration of the external parts; malposition of the head; the descent of the funis, or the hand with the head. In the second class we enumerate, laceration of the uterus and vagina; laceration of the bladder; tumours in the pelvis; convulsions." p. 287.

Mr. Ashwell need have only consulted Baudelocque, or any of the French writers since his time, to have discovered the very association he has made, and which he seems to insinuate, is original with him. As respects ourselves, we entirely agree in the propriety of this arrangement; for we have been familiar with it ever since we read Baudelocque, and constantly acted agreeably to the indications they have severally afforded. It appears to us a little singular that "obesity" should be enumerated as one of the "accidents" accompanying a natural labour, any more than any other labour that may happen. It is a constitutional defect; but it never occurs suddenly during parturition. Therefore the observations on labours of very lusty women, properly belong to the considerations of labours in general, and should have been placed there. Fatness alone, does not necessarily create difficulty; we are in the habit now of attending several very fat women, and have attended many such since we have commenced business; but in no instance did this condition of body of itself create difficulty. It is true, we have in two instances encountered severe and tedious labours; but in both of these cases the pelvis was contracted;



in the majority of other cases the process was such as ordinarily occurs; in several, the labours were as rapid as in leaner women.

“Syncope, not dependent on hæmorrhage from the uterus,” is not a frequent occurrence, nor is it alarming, when it depends upon some peculiarity of the nervous system. It is, however, occasionally very distressing, and requiring the immediate interference of the accoucheur. Of this kind are the cases related by Baudelocque, as proceeding from a gall-stone; and the one given by Dr. DAVIS, and for which no cause could be assigned. The one recorded by our author, we are of opinion was nothing more than the after-effect of the large doses of laudanum he administered during the progress of the labour, for half an ounce of this medicine was given in one hour, in enemata—we have several times seen long-continued syncope from the use of opium.

Be this as it may, Mr. A. in managing this case did not act upon the principle he lays down for the treatment of syncope, when not occasioned by uterine hæmorrhage. For he says, that “the forceps and the ergot appear to afford the best chance of relief in these cases,” yet he employed neither, in the case he has recorded—on the contrary, he permitted the labour to take its course, notwithstanding the uterus was “fully dilated” a long time before it terminated, though he says, “at one period I had prepared some infusion of the ergot, and should have used it had not the pains recurred.”

It may be said, however, in this case, that Mr. A. pursued the proper course, as the labour terminated without the aid of either ergot or the forceps—we will only answer, it so happened; but had Mr. A. any security that this would take place without some extrinsic aid?

In his account of the bad position of the head, he includes the presentations of the face; the whole of this section seems to betray either a deficiency of experience, or a want of careful observation. His opinions on the face presentations, are at variance, so far as we know, with all the best writers upon midwifery. He has followed the arrangement of Baudelocque; but he has not profited by this enlightened practitioner's opinions upon the comparative safety of the respective presentations; for he insists, that “where the chin of the child is opposed to the pubes, is the most favourable position, both as regards the safety of the child and the facility of management.” p. 309. We might oppose our own experience to this declaration; but we will do better; we will give the opinions of Baudelocque and Burns upon this point. The presentation under consideration, is the second face presentation of the first of these authors; of this he says, “we cannot expect to reduce the

head to a natural position, in the second presentation;\* it would be wrong and dangerous to attempt it, but when the membranes have just opened." We cannot indicate with certainty the precise position of this species of presentation, in the work of Mr. Burns, as he expresses himself with very little precision on this point—therefore, lest we should commit ourselves in giving it a numerical location, we will quote the whole of the sentence that refers to the subject in question.

"The face may present with the chin to one of the acetabula, or to the sacro-iliac junction, or to the pubis, or to the sacrum. The first *two* are the best, the *second* is more troublesome, and the last is worst of all." Now if this statement be correct, there will be six presentations of the face; for if the chin can offer, either to an acetabulum or to a sacro-iliac junction on one side of the pelvis, it may be able to do so on both. But no matter; the chin he says may present to the pubis, and this "is more troublesome" than the two first. From this it is evident, that neither of these gentlemen regarded the presentation under consideration, "as the most favourable, both as regards the safety of the child and the facility of management." We may go further; we may even question the possibility of this position, and its reverse; and we think it would be no very difficult matter to prove this, were this the time or place.

For the relief of this case, our author says *turning* may be attempted, when "the pains are not very severe, and if the head has scarcely descended at all beyond the brim, the os uteri being well dilated." He adds, "we prefer, however, *if possible*, to rectify the position, and by disengaging the forehead and chin, convert it into a vertex presentation." Convert a face presentation into a vertex by "disengaging the forehead and chin."!! For there is not a mention made, of placing, or restoring the chin of the child to its breast, and without which, he could not convert a face into a vertex presentation.

"The *instrumental* management of these cases comprises the use both of the *lever* and *forceps*. If the presentation be early discovered, the lever may, *perhaps*, by judicious and skilful application, effect an alteration of position, more advantageously than the hand alone. To accomplish this purpose, it must be introduced by the side of the pelvis, and passing over the vertex, it must obtain a firm bearing on this part. We may afterwards depress the occiput, carefully raising up the face, by the fingers of the other hand."

Now we do declare, and this without the fear of contradiction, that

\*"In the second position, the length of the face presents parallel to the small diameter of the entrance of the pelvis; but the chin is behind the pubes, and the forehead before the sacrum."—*Baudelocque*.

the operation now described never has, nor never can be performed; and for this plain reason—because it is impossible. No skill, no address, can place the clam of a lever upon the vertex, when the face is situated as just described; for it is mounted above the pubes, and even a little in advance of the symphysis; and consequently, would require that the handle of the vectis be carried farther backwards than even the point of the coccyx, (were this practicable,) before it could command the advanced vertex. Besides, in this case, the lever would not be long enough, as it is generally made, by several inches, were no other difficulty to present itself—it cannot be done, even upon the machine.

It is true, that our author may say, that the plan in question has been recommended by Baudelocque, who may be looked upon as paramount authority—but it is proper that we should not be misled even by Baudelocque, when reason and fact oppose his doctrine. For it has been attempted over and over again upon the *manuquin*, and the impossibility to perform, what has here been recommended, has been most successfully demonstrated. Now, if our datum be true, as we most honestly believe it is, Mr. A. cannot have written from his own experience; and he may verify for himself, what is here asserted, should this ever meet his eye, by repeating the experiment, *of reducing the vertex by means of the lever, when the face presents in the situation in question.*

We have dwelt longer upon this point than we intended; but its importance must plead our excuse; for in difficult cases, too much care cannot be exercised, that the young practitioner may not be misled; for upon proper directions the lives of both mother and child may depend.

One of Mr. A.'s rules for the management of footling cases is very singular; and we are disposed to believe that the advice as it stands, to be a slip of the pen, rather than a deliberate direction to be literally followed. He says, "The rule, therefore, is, not to interfere until the nates are born; *not to rupture the membranes.*" Has Mr. A. ever seen a case at full time, in which the membranes were preserved until the nates were without! And we do not hesitate to say, that another which quickly follows, would as often destroy the child as it would preserve it:—

"In presentations of the breech and feet, this turn," (the great diameter of the head being placed to that of the strait,) "is equally desirable; and if, when the nates have reached the external parts, we find the toes pointing towards the symphysis pubis, we know the head is unfavourably situated. Grasping the parts firmly, therefore, having previously covered them with a napkin, we wait



for the next pain, and then such an inclination is to be given to the body of the child, as shall direct its abdomen towards its mother's spine." p. 350.

We look upon these directions to be wrong, from the beginning to the end, if the evil they are intended to remove, were absolutely certain of accomplishment. Because, first, it directs that the turn with a view to correct the position of the head, is not to be made until the nates are without; now we have no hesitation to say, if left until this period, it would either be unavailing, or injurious; unavailing, because, no movement that can be executed upon the body of the child, would have sufficient influence on the head, to make it change its position, for it would do no more than give a twist to the neck; injurious, because this very twist, would describe half a circle; one-quarter too much for the safety of the child. If this change becomes necessary from the presentation of the child, namely, as in the fourth of Baudelocque,\* it should be attempted during the whole progress of the legs through the os externum; and even then its success would be extremely doubtful, owing to the head not obeying a twist given by the neck, however extensive this may be. But this twist should never exceed a quarter of a circle.

Second. He directs that this twist should have the co-operation of a pain—the very worst time to make the attempt; for during a pain, the head will be firmly embraced by the contracting uterus, and consequently cannot obey an impulse given to it by twisting the body of the child, if it should be even made to feel one by the manœuvre recommended by Mr. A. when not opposed by the contraction of the uterus.

Third. If it were granted, that the position of the head can be changed by a movement executed upon the body of the child, it might be fatal to it, as the chances are equal, that this twist may be given in a wrong direction.

There is room for remarks upon the want of precision in his directions for the delivery of the arms and head—but we must pass them by.

"Class II. Order 2.—Labours which cannot be completed without the aid of extracting instruments," &c. Sect. 2.

Of the Forceps.—Mr. A. commences his remarks upon these instruments with the following judicious and important remarks; and to which we most cordially subscribe:—

\* "The fourth presentation of feet, the child's back and heels are towards the posterior part of the *uterus*, while the toes, the face, and the breasts are under its anterior part."—*Baudelocque*.



"If after a fair trial of every expedient, which the peculiar circumstances of the case may suggest, and after having allowed the fullest exertion of the natural powers compatible with the safety of the woman, the labour makes no advance, we must have recourse to instrumental aid, and while it is peculiarly desirable that this should not be prematurely bestowed, it is not less so, that a timid dread of the use of instruments, should not deprive the woman of her only chance of escape, from the generally fatal consequences of a too protracted labour. We do not deny the danger arising from the forceps and lever in the hands of hasty and injudicious practitioners." p. 358.

We cannot, however, approve of the practitioner waiting until alarming, and above all, until dangerous symptoms shall make their appearance, before artificial means be resorted to; we cannot therefore altogether approve of the rules for the use of the forceps as laid down by our author. A necessity for employing artificial means will exist agreeably to him, when

"The pains become weak, short, and inefficient, producing no effect on the head of the child; sometimes they are entirely suspended; and although their cessation *within the first twenty-four hours* does not justify the use of instruments, as it may be only temporary, yet if it occur at the end of the second or third day, if the pulse, the countenance, and the general appearance of the woman are expressive of extreme debility and fatigue, a strong presumption is afforded, that we have waited sufficiently long to unassisted nature. If, in addition to these symptoms, we have head-ache, mental inquietude, shivering and vomiting, a pulse 120 or 130, furred tongue, a hot skin, great thirst, abdominal tenderness, heat and soreness in the vagina and os uteri, we feel assured our patient has approached to a state, from the evil consequences of which instrumental aid will alone deliver her." p. 362.

We believe that we do not assert too much when we say, that no well instructed American accoucheur would wait until the above dangerous symptoms show themselves, before he would have recourse to efficient aid; and would feel it as bounden a duty by timely interference to prevent such alarming symptoms from taking place, as our author appears to feel it to be his, not to give assistance until they have occurred. We would ask, for information, what prospect of a happy termination has that practitioner who only resolves to employ the sole means that can afford relief, after the direful symptoms last enumerated have taken place?—we say, we ask for information; for the American practitioner rarely has it in his power to witness such a case, or to become acquainted with its result. In his estimation, it would present nothing but hopelessness and destruction; he may be wrong, however, in his prognosis; but he could scarcely be persuaded to put his judgment to the test, by permitting the case to run on, until such symptoms appear. Regulating the propriety of inter-

fering with a labour by the number of hours that may elapse, instead of being guided solely by symptoms on the part of the mother, and the preservation of its life on the part of the child, is the *very bane of sound practice*; but our pages warn us to stop, or we could say much upon this most interesting point.

Mr. Ashwell, like ourselves, is an advocate for the long forceps; and in the use of these instruments, has inculcated sentiments, in regard to this point, that we have often wished to establish. We therefore transcribe with much pleasure his observations; and we do this the more willingly, as they come from a quarter from which opposition almost alone, has been made to the use of these instruments; namely, Great Britain:

Mr. A. says, "There can be no doubt that many of the difficulties of parturition, for the removal of which the *perforator* has *often* been employed, were cases in which the head, owing to the contraction of the brim, could not, by the unassisted efforts of the uterus, be propelled into the cavity of the pelvis. The practitioner in these circumstances, unacquainted with the value of the long forceps, would wait probably for some considerable time; but finding that the head made no advance, perhaps that not *one-third* of its circumference was encircled by the brim, and knowing that it was impossible to reach it by the common or short forceps, and that exhaustion and other dangers might be induced by farther delay, feels little or no hesitation in *unnecessarily* sacrificing the life of the child to the safety of the mother. All instruments may be rendered dangerous, if too early and rashly used; yet we think that experience is decidedly in favour of the greater safety of the mother, from their too early, than from their procrastinated employment. Rupture of the uterus, abdominal and local inflammation, terminating in gangrene and sloughing, irreparable exhaustion of the system, and a series of other events not necessary to be enumerated here, may all be occasioned by a too protracted difficult labour. Indeed, we are sometimes almost induced to believe, that great evil has arisen from the multiplied and fearful associations which have been so invariably connected with the use of instruments. Some practitioners are thereby deterred from even thinking of their employment, till a period has approached when little good can be anticipated from their aid. Others think it so superlatively difficult to determine the cases proper for their use, and the precise time and manner of their application, that they think it unnecessary to acquire a thorough knowledge of the principles on which instrumental labour can alone successfully proceed, not remembering in some instances, valuable lives may be entirely dependent on their sole and unaided exertions, and that before they can obtain the assistance of another practitioner, their secret source of reliance, the proper moment for interference may have been finally lost." pp. 368-9.

In this general estimate of the value of the forceps; the advantages of the long, over the short; the dangers arising from too long delay, and the want of decision on the part of the practitioner, who may not be fully instructed in the more important principles of midwifery, as

we have before said, we most fully concur; for they are points we have often and earnestly endeavoured to enforce, though we may despair of ever producing entire conviction on the minds of such as are predetermined, from either education, constitutional timidity, confined instruction, or more limited experience, against the use of these instruments.

But let us not be understood as concurring in all the sentiments of our author on the use of the forceps, while the head of the child is still at the brim of the superior strait; for we are decidedly of opinion that much difficulty attends their use at this part of the pelvis. Indeed we think that none should undertake this operation but those who have become familiar with the application of these instruments at the lower portions of the pelvic cavity, and who are also thoroughly acquainted with the mechanisms of head presentations.

For it is not alone sufficient as our author declares, to "let it be understood, that although very rarely, that sometimes artificial aid is necessary—that it behooves the practitioner accurately to discover the nature of the difficulty opposing delivery, and how far it is likely to be overcome by the natural efforts; that if he deliberately determines these to be insufficient, he is next to ascertain the precise situation of the child's head, in reference to the pelvis." For after these difficulties are overcome, others of greater magnitude will remain to be surmounted; namely, the adjusting of the instruments *comme il faut*, upon the child's head; overcoming the resistance to its descent, and the proper navigation of it through the different straits. Nor can we agree that the knowledge by which all this is to be effected, can be either "clearly," or "simply taught"—for nothing short of considerable experience will ensure success, after the operator has been as "clearly and simply taught," the mode of applying the forceps when the head is at the superior strait, as the thing is susceptible of, without the aid of practice.

We are of opinion, that the author has not been sufficiently explicit on the subject of the deviations of diameter at the superior strait, for all the purposes of practical utility. For it is not enough for the ill instructed, who may seek for information in his book upon this head to be informed, that, "the long forceps is peculiarly applicable to those deformities of the brim of the pelvis, which are produced by contraction of its antero-posterior diameter." p. 371.

It would have been useful indeed, had he specified in explicit terms, the degree of contraction that precludes the use of the forceps altogether, or the extent, that can be surmounted by their aid; for almost every thing will depend upon the degree of opening in the an-



tero-posterior diameter of the superior strait. For if this diameter be contracted below three inches, these instruments must not be thought of.

He very properly and decidedly prefers the forceps in these cases, to the lever; for he very justly observes, that

"The lever, unlike the forceps, has no fixed fulcrum, and if the first degrees of force are not sufficient to overcome the obstacles, an additional degree of power, injudiciously imparted, may, by converting the bony pelvis into a fixed point of action, seriously injure the soft parts of the mother." p. 372.

We regret that one so apparently well acquainted with the power and utility of the long forceps, should so entirely have committed himself, by an indifference, whether these forceps have or have not a "*curvature*." He says, "Some practitioners prefer this instrument with a *curvature*, by which the handles are thrown forward, and the perinæum rendered perhaps more secure. We do not think this a matter of importance, as, after all, the protection of the perinæum will mainly depend on the address and gentleness of the accoucheur." p. 373.

But the security of the perinæum is not the point in question; for were it reduced to this, its security might be trusted, though with some risk, to "the address and gentleness of the accoucheur." Much more important considerations present themselves when an accoucheur attempts to deliver from the superior strait; namely, 1st, the difficulty of applying the instruments; and 2d, the mode of operating after they are fixed. In the first case, the axis of the superior strait is so much in advance of the inferior, that the forceps can only be made to traverse it by very strongly forcing the handles, of even the curved forceps, against the perinæum, and carrying it backwards. Now if this be the case with the curved instrument, as it certainly is, how much more necessary, and at how much greater risk of injuring the integrity of this part, must it be with the straight? Indeed we are of opinion, that this operation should never be attempted, but by the curved forceps.

In the second place, it is absolutely essential to the success of this operation, that not only the axis of the superior strait be constantly kept in mind, but also that the oblique position which the head takes, (in consequence of the angle observed by it,) should be remembered, when it is about to enter and pass through this opening. For it must be recollected that the head does not, nor cannot offer perpendicularly at the upper strait, as the opening at this part is at an angle of from  $35^{\circ}$  to  $40^{\circ}$ ; consequently, the power applied to the head in order to make it descend, must be in the axis of this departure from a per-



pendicular position; and to effect this, the handles of even the curved forceps must be made to press forcibly against the perinæum; and it would require that the point of the coccyx should be touched, if the straight forceps were employed, which would be very unsafe to the perinæum, if it could even be preserved by any care or address of the operator. Indeed it seems but just to say that the author appears to be aware of the force which must be applied to the perinæum, though he does not express it; for he says, (p. 365,) "If we are employing the long forceps, and the head is above the brim we should draw down in a line towards the coccyx."

There is much obscurity in the following passage:—"When we can feel the ear in a vaginal examination, the case is manageable by the forceps;" (is it not manageable when we cannot feel an ear? Has not the author just spoken of delivery from the superior strait;) and the latter part of this period is altogether unintelligible; for continues Mr. A. "as the blades, being twice the length of the finger, will embrace the head, except where syncope is occurring from hæmorrhage, the ear may have remained in this situation some hours before the forceps is absolutely required." p. 365.

Notwithstanding our conviction of the occasional necessity of the forceps, and our predilection in favour of the long ones, we cannot go the same length as our author, in recommending them; if we do, it is always under very severe restrictions, if the head has not passed through the superior strait. He says, "again, in those cases of hæmorrhage, syncope, or convulsions, arising when the head has not descended sufficiently low into the pelvis, to be within reach of the common instrument, the advantages obtained, both for the mother and child, by the use of the long forceps, are very decided." p. 372. We would not wish the inexperienced practitioner to be so far misled by these observations, as to attempt the relief of his patient by using the forceps when the head is situated as just specified. Turning in such instances, under its proper restrictions, is the proper remedy, when the cases demand manual interference. Of the mode of applying the forceps; of the vectes; of the perforator; and the Cæsarian operation, we shall say nothing; as we have already very far exceeded the limits we had prescribed to ourselves. And for the same reason, we shall pass in silence the whole of his third class, or flooding labours; as well as the fourth part of the work, comprising the diseases of the puerperal state, together with the appendix intending to notice these at some other time.

## BIBLIOGRAPHICAL NOTICES.

XV. *On Aneurism, and its Cure by a New Operation.* Dedicated by permission to the King. By JAMES WARDROP, Surgeon to his Majesty. London, 1828, pp. 117, 8vo.

The object of Mr. Wardrop in this publication is to prove the efficacy of treating aneurism by fixing a ligature in certain cases on the artery affected, beyond the aneurism, or as it has been termed by British surgeons, on the *distal* side of the tumour.

Though the experience presented by Mr. Wardrop is too limited to serve much further than as a guide to future inquiries, yet its character is so interesting that no apology is necessary for the following notice, which must be necessarily brief, as the work has but just reached this country, and the opportunity has not been afforded us of studying the cases detailed in it very closely. We shall, however, probably return to the subject hereafter.

The fact is sufficiently familiar that as aneurism advances in age and in size, a concentric laminated deposition of coagulating lymph occurs in its cavity, and sometimes obstructs so completely the current of blood through it, that spontaneous cures have taken place without the interposition of art. This tendency is so general and universal, that our distinguished collaborator, Dr. Physick, has proposed to make it a basis of cure in certain impracticable cases, by introducing a fine metallic needle into the cavity of the aneurism, and leaving it there a sufficient time for a nucleus of coagulation to be formed upon it. It appears also that this lymph is occasionally disposed to take on a condition of vital organism, like lymph effused into other cavities.

With the fact before him of a spontaneous cure by a deposition of lymph filling up the sac completely, Brasdor, a professor of surgery in Paris, proposed, more than forty years ago, that in cases of aneurism, where the tumour was so near the heart or large cavities, as to make it impracticable to fix a ligature upon the cardiac section of the artery, the ligature should be fixed upon the remote or peripheral section of the artery, or the part beyond the tumour. The celebrated Desault was an advocate for this practice but never tried it. Deschamps, a contemporary, actually put it in practice upon the femoral artery, but from some peculiarly unpropitious circumstances the experiment failed. It was subsequently tried by Sir Astley Cooper, in a case of aneurism of the external iliac, but it also failed in his hands, the patient having died from the bursting of the aneurism. Notwithstanding the failure in these cases, the principle remained, that a perfect obstruction to the current of blood through an aneurism by a ligature beyond it, would cause the coagulation of the blood remaining in the tumour, and consequently a cure of the latter.

Governed by these considerations, Mr. Wardrop, in June, 1825, on the person of a female, aged seventy-five, who had a carotid aneurism just above the right clavicle, took up the artery above the tumour. He has given a full account of the case and of the operation, but as the details are of a familiar kind, it is

unnecessary to introduce them. On the fourth day the tumour had diminished one-third, on the fourteenth it was only half the original size, and at the end of the fifth week the neck had nearly resumed its natural form. At the expiration of three years the patient continued to enjoy good health.

In December, 1825, a female, aged fifty-seven, was presented to him, with carotid aneurism of the right side, extending from the clavicle two inches upwards. She was also operated upon by fixing a ligature on the artery above the tumour. This patient died on the 23d of March, from hypertrophy of the heart, the tumour having in the mean time subsided to the size of an almond, and the wound having cicatrized. On dissection the carotid artery was found empty, but dilated at the situation of the tumour, and the aorta and arteria innominata were unsound from ossific depositions upon their internal face.

In January, 1827, a female, aged forty-nine, of unhealthy appearance, having carotid aneurism also on the right side, above the clavicle, was submitted to the professional care of Mr. Wardrop, the tumour being the size of a large walnut. She was operated on by fixing a ligature on the artery above the tumour. The tumour after a while entirely disappeared and the wound cicatrized. Five weeks after the operation the cicatrix ulcerated and a fungous growth sprang up from it, this was followed by repeated hæmorrhage, and the patient died about the sixtieth day from the operation. On dissection after death, the following was found to be the state of the artery:—

“At the root of the right common carotid artery was a consolidated tumour, of a pyramidal shape, its base below and extending two inches up the artery, and was at its lower part about half an inch in breadth. A probe could not be passed upwards, from the arteria innominata, and water forcibly injected at this part would not pass; so completely and effectually closed was the lower part of the carotid artery. On making a longitudinal section of the tumour, we observed at its lower part a firm coagulum of blood, of about the size of a French olive; it accurately closed the opening at the base of the carotid, and it was this which afforded the resistance to the probe and injection of water passing upward from the arteria innominata. The coats of the artery where surrounding the coagulum, were thickened to about four times their natural size, and lined by a thin layer of fibrine. Above the coagulum the coats of the artery were thickened to the extent of at least six times their natural size, and in addition to a layer of fibrine closely adherent to the inner surface of the artery, and continuous with that surrounding the coagulum at the lower part of the tumour, there were three other layers of coagulated lymph. They were evidently adapted to the cylindrical shape of the vessel, and appeared to have been formed successively, thus gradually encroaching upon and at length obliterating the entire calibre of the artery. At the upper part of this thickened state of the artery, and just above the omo-hyoideus, where the ligature was applied, was an ulcerated opening on the anterior and tracheal surface of the carotid artery, a quarter of an inch in length and rather less in breadth, covered by a coagulum of dark-coloured lymph, communicating with the opening in the integuments. The posterior surface of the artery, corresponding with the ulcerated opening on the anterior part, was covered with a coagulum, and on removing this the division of the internal and middle coat produced by the ligature was observed. Above the ulcerated opening the ca-



rotid artery was pervious and healthy, with the exception of a few spots, resembling those observed in the arteria innominata; and there did not appear to have been any attempt made to effect obliteration. The superior thyroidal artery, given off a little higher than usual, was readily distended by throwing water into the arch of the aorta, which passing through the left carotid artery, regurgitated by means of anastomosing branches, through the right external, internal, and common carotid artery, and flowed out at the wound. The trunk of the superior thyroidal became *very* manifestly enlarged on injecting the water from the aorta."

In a fourth case of carotid aneurism treated by George Bush, M. D. Professor of Anatomy, New York, the patient, a female aged thirty-six, and having a carotid aneurism, the size of a small hen's egg, on the right side, was operated on according to Mr. Wardrop's plan. The wound was healed on the twenty-seventh day, and the tumour was then reduced to one-half its bulk, and almost free from pulsation. On the 19th of the subsequent April, the patient was in perfect health with scarcely a remnant of the tumour.

Encouraged by his instances of success, Mr. Wardrop undertook to cure an aneurism of the arteria innominata, by tying the subclavian artery. The case is that of Mrs. Denmark, aged forty-five, who had an aneurism the size of a turkey's egg, one portion of which was situated under the sternum, and the other appeared at the inner edge of the mastoid muscle. The subclavian artery was secured as it passed over the first rib by some peculiarities of minor account in the mode of operating. The operation having been executed on the 6th of July, the patient, about the end of August had got so far well that there was no appearance of aneurism left. The following report shows the state of the patient one year afterwards, (August 8th, 1828.)

"She is more reduced in point of flesh than at the period of the last report, but this has evidently been owing to the attack of bronchitis, and the severe measures to which she has been subjected, for, within the last six weeks, she has regained her former appearance in a wonderful manner. The difficulty of respiration has greatly diminished, so much so, that she can now sleep in the natural position, and she is entirely free from the dreadful sensation of threatened suffocation. No tumour is perceptible in the situation of the former aneurism, but an unnatural feeling of hardness can be perceived at the root of the neck, immediately above the sternum, arising, no doubt, from a condensation of the aneurismal tumour. The right carotid artery still pulsates, although not so strongly as the left; its pulsation corresponds to that of the heart, but its branch, the temporal artery, affords no indication of the circulation of blood; the right radial artery beats with about half the strength of the left. She suffers none of those pains in the regions of the neck, shoulder, and back; nor has she for a long time, experienced any of those severe head-aches which formerly gave her so much uneasiness; the œdema of the feet has entirely disappeared, and she takes exercise in the open air daily.

"The above report was drawn up a month ago, previous to her visit to the country, from which, in a letter received from her yesterday, she states that she is now in a better state of health than she has been for a long time."

This case is followed in an appendix, by the narration of one successfully treated, by D. Evans, Esq. surgeon at Belper. The patient, aged thirty, a

butcher of athletic frame, had aneurism of the innominate and root of the carotid, reaching as high as the cricoid cartilage. A ligature was fixed on the carotid above the tumour.

These several instances of success would seem to point out the mode of operating, by fixing a ligature on the artery beyond the tumour, as fully justifiable, and indeed promising the best results in cases heretofore deemed hopeless.

W. E. H.

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XVI. *Mémoires de l'Académie Royale de Médecine.* Tome Premier. Avec six Planches. Paris, J. B. BAILLIÈRE, 1828, 4to. pp. 496.

The Royal Academy of Medicine was instituted by a decree of Louis XVIII. on the 20th of December, 1820, and consists of a Section of Medicine, a Section of Surgery, and a Section of Pharmacy, each made up of honorary, titular, associate, and adjunct members. Each section elects its honorary, titular, and adjunct members, subject to the royal approbation: the associates, as belonging alike to all the sections, are elected by the whole academy. The institution has enrolled among its members nearly all the distinguished medical men of France, and its list of foreign associates, though comparatively small, presents some of the names of the most celebrated scientific and professional men in the world; the name of *Physick* stands immediately under that of the illustrious *Humboldt*, and is succeeded by the honoured and renowned names of *Scarpa*, *Semmering*, *Sprengel*, &c.

The volume before us is the first which has been published under the auspices of the academy. The first three hundred and thirty-nine pages of this large volume are filled with matter of comparatively slight interest, consisting of the laws of the academy, eulogies on various distinguished members, among whom may be mentioned *Pinel*, *Corvisart*, and *Bertholet*; the report of the committee on epidemics, and the first report or summary of the labours of the Section of Medicine. However interesting it might be to dwell upon the merits of the great benefactors of science, commemorated in the above-mentioned discourses, we must on this occasion be content with referring to the original, and pass on to matter more immediately of a practical nature. The Report on Epidemics is from a distinguished committee, consisting, among others, of *Portal*, *Chaussier*, *Desgenettes*, *Larrey*, *Vauquelin*, &c. charged with the formation of a plan of instruction relative to epidemics. This task has been accomplished in a very satisfactory manner, and the importance of the subject, and all the aspects under which it should be studied, are indicated and insisted upon with great force and clearness. This report should be read entire to be productive of advantage, and as it is highly probable we shall hereafter have an opportunity of giving a translation of it, we shall not attempt to present a more detailed account at this time. A few extracts from the account of the labours of the section of medicine may prove acceptable to the reader, though it is possible that the subjects are not entirely new.

“For a long time the muscularity of the uterus was contested, both because it had not been demonstrated by the knife, and because the direction of the supposed or demonstrated fibres could not be determined. *Reverch* first pointed out at the fundus of the organ a layer of muscular fibres, which he described

as a new muscle, intended to facilitate the separation of the placenta. Later anatomists bestowed upon this, the name of the muscle of Ruysch. Weitbrecht discovered two layers of muscular fibres, surrounding the uterine orifice of each of the fallopian tubes. He described these as two orbicular muscles. JEAN SUE had distinguished on four sides of the womb, many points where the fibres were interlaced in such a manner as closely to resemble the nodosities of wood. These he considered as four distinct muscles, which he called *quadrigemini*.

"Madame BOIVIN, mistress-midwife, animated by the encouragement of the section, pushed the discovery much farther. She has remarked with exactitude in the texture of the organ four superposed layers of muscular fibres, distinct and easily separable from each other. She successively determined and described the extent, force, and particular direction of these fibrous bundles upon the external surface of the uterus; she found upon the border, and each side of the median line a transverse order of fibres in three distinct bundles, one directed forward the other two backward. These three bundles, placed upon each other, after having transversely traversed the rounded angles of the organ, and furnished fibres to its anterior and lateral walls, continued, in becoming insulated, to form the round ligaments of the tubes, &c. On the internal surface, upon the median line, before and behind, are found other layers of entirely vertical fibres, which also extend from the internal orifice of the uterus up to the fundus. Arrived at this point, these fibres are recurved, and diverging, direct themselves from the centre to the circumference, crossing and interlacing with each other, to form around the fallopian angles the double layer of concentric fibres which have been made known by some anatomists, under the denomination of orbicular muscle of the tubes. Finally, at the internal part of the cervix uteri, Madame Boivin particularly remarks a sort of raphe, equally marked upon both surfaces of the cervix, and upon the median line. From each side of the raphe arise numerous folds, regularly disposed: upon the anterior surface, these folds, throughout remarkable for their regularity, are formed like a palm leaf. On the posterior surface, the fibres also exhibit a ramified arrangement, though they are here more irregular.

"Charles Bell, in England, has made similar researches; but less favoured by circumstances, he did not push his researches as far as Madame Boivin, so that part of our distinguished mistress-midwife's researches are confirmed by those of Bell, without losing any of their originality or merit."

Mr. Breschet has proved, that besides the three forms of extra-uterine pregnancy already known, the abdominal, ovarian, and tubular, that there is a fourth in which the fœtus occupies a point in the thickness of the organ, while the cavity remains empty. This observation of Breschet is supported by two cases which occurred in France, and three analogous cases, one communicated by Dr. Albers of Bremen, another by Professor Schmidt of Vienna, and the third by Drs. Hedrich and Carus of Dresden.

M. Barthélemy has furnished an instance of softening\* of the spinal marrow

\* The word in the original is "*Ramollissement*," which some writers use, (as if it were untranslatable,) as an *English* word! What idea an English reader is to form from the word thus used, we can hardly imagine; or why any writer should permit himself to make use of words conveying *no idea*, except to those acquainted with foreign languages, we are at a loss to determine.



under remarkable circumstances. A horse was inoculated with the saliva of a rabid dog, became hydrophobic, and died on the third day afterwards. The body was examined, and the cineritious substance of the whole extent of the spinal marrow was very much softened, and of the colour of wine-lees. The membranes enveloping the spinal marrow were also much injected. M. Dupuy has observed the same sort of softening in hydrophobic cows, but never in mad dogs.

The first paper in the second part of these memoirs is by ITARD, on the dumbness produced by the lesion of the intellectual functions. He gives a very interesting account of the condition of such patients, whose dumbness is owing to a certain degree of deafness and a peculiar inaptitude of memory, which renders them unable to pronounce the names of things with which they are perfectly well acquainted. In general, he says this difficulty or inaptitude of memory to retain impressions received by the ear is not the same for all the sounds of the human voice; modulated sounds for instance are much better retained than spoken words. Some of these dumb, retain airs with much facility and hum them over with correctness. Itard was consulted in the case of a girl who when she attempted to speak uttered unintelligible sounds, yet could sing in a very correct and distinct manner a Languedoc song. He details at length the discipline he adopts to relieve this dumbness, by gradually teaching the patients to utter the names of familiar objects with which they are already acquainted by signs, and in cases where the intellect is not otherwise defective, he has completely succeeded in restoring the patients to the power of speaking.

This dumbness from amnesia is a subject of much interest; and we hope the time is not far distant, when we shall be aided by the light of anatomy to understand the manner of its causation. Our readers will recollect the very interesting case published in our last number by our colleague, JACKSON, of Philadelphia. Since the publication of that case, another, strikingly similar has fallen within our knowledge, in the practice of a highly respectable physician. In this latter case, the only symptom remarkable was the amnesia, an inability to remember or utter words, either by the voice or with a pen, without the least impairment of the motions of the tongue, or the organs concerned in speech, and with a perfect understanding of all that was said, or indicated by signs. After depletion, this patient became able to articulate *yes* and *no*, and after a lapse of several weeks he could express himself in such a manner as readily to be understood. We hope that a proper account of this case will hereafter be given.

The second memoir is also by M. Itard, and the subject is some *cerebral phlegmasiæ*, indicated as causes of *malignant intermittents*. From the facts collected, M. Itard clearly shows that malignant or pernicious intermittents are produced by inflammations of the membranes or parts of the brain itself. Most of the cases related terminated fatally, and we apprehend the quinine administered for the (name of the) *intermittent*, accelerated the event. Nevertheless, the author concludes his observations in the following manner; "let us not forget to remark, as a precious therapeutic fact, that in the different attacks of pernicious intermittent, suffered by his patient, the quinine given in large doses had an excellent effect, although this fever was symptomatic, and evidently provoked by inflammation." The patient from whose case this "precious fact" is obtained, had intermittent, provoked by a disease of the internal ear, which

at the conclusion of the paroxysms commenced a free discharge, a circumstance quite sufficient to show that any deduction as to the usefulness of quinine in intermittents from cerebral inflammation is altogether gratuitous. M. Itard gives no farther views of the subject, but contents himself with showing that the inflammation of the membranes, brain, or bones of the cranium, may cause malignant intermittent, of which there cannot be a doubt in the minds of experienced physicians. Nor do we think that any other conclusion can be drawn from our knowledge of the pathology of such cases, than that the *treatment* should be directed to the local inflammatory affection, without reference to the "*intermittent*" appearance of symptoms. Happy will it be for mankind and our profession, when physicians shall cease to prescribe for the *names of diseases*, and devote themselves to study the actual conditions of organs in health and disease.

The third memoir is by ESQUIROL, and is an examination of the question, whether the number of insane is greater now than formerly? All his inquiries and observations lead him to draw the following conclusions:—1st. That the incumberment of the public establishments in France, particularly at Paris, does not prove that the number of insane is really augmented, more than the appreciation of the causes of the disease accounts for. 2d. That the exertions and writings of physicians, especially those of PINEL, have powerfully contributed to awaken an interest in favour of the insane, and, consequently, has induced a belief that the number of alienated patients is augmented. 3d. That the improvements of all kinds introduced in hospitals destined to receive these unfortunates, by attracting a greater number of individuals, has given strength to this opinion. 4th. That since the augmentation of the number of insane patients is only apparent, it is not true that mental alienation is a calamity belonging to the present times.

The fourth paper is an elaborate inquiry relative to the mortality in France, of the richer and poor classes, by L. R. VILLERME, and abounds in details and observations of great interest. We must confine ourselves merely to the conclusions the author has drawn from the facts, which are as follows:—

There die in the rich departments 20-100ths individuals at 1 year old; and 22½-100ths in the poor.—At 4 years, 31-100ths of the rich, and 35-100ths of the poor.—At 10 years, not quite 38-100ths rich, and 44-100ths poor.—At 20 years, rather more than 42-100ths rich, and 49-100ths, that is, nearly one-half of the poor.—At 40 years, 54-100ths rich, and 62-100ths poor.—At sixty years, 68½-100ths rich, and 78-100ths poor.—At eighty years, 93-100ths rich, and 96-100ths poor.—At 90 years of age there remain 82 individuals of 10,000 inhabitants in the rich departments, and not more than 53 from the same number of poor.

The excess of mortality among the poor is observed at all ages; it is greater among old men than among individuals in the vigour of life, and still more particularly among very young children. The mortality among the foundlings is so great, notwithstanding the ardent zeal of charity, which, however, can never supply the want of the mother's milk, nursing and superintendence, that in Paris 60 perish during the first year after birth out of every 100; and frightful as this morality is, it is the most favourable which has ever been obtained by the establishments of foundling hospitals in the capital.

The ensuing memoir is by V. BALLY, on the therapeutic effects of morphine

or narcine. In our last number, (p. 457,) a summary of M. Bally's conclusions on the use of morphine will be found. It is therefore unnecessary to repeat them here, though we can state with great satisfaction, that the memoir will amply compensate the reader for the most attentive perusal. It is one of the most elaborate and carefully conducted investigations which we have read for a long time, and proves its author to be a most patient and philosophical observer, as well as a judicious and excellent practitioner.

Doctor LEVEILLE next gives an ample memoir on the drunkard's delirium, *delirium tremens*, of various writers, in which he gives a very excellent account of the disease, and the modes of treatment. That by the administration of opium, now most generally resorted to in this country, he prefers, and has found to be almost uniformly successful. In passing he treats of various topics connected with delirium tremens, in an interesting manner. There is nothing, however, very new or very striking in his views to require that they should be repeated here. Dr. B. H. COATES, of Philadelphia, has published the best observations which have yet appeared on this subject, and his paper has furnished a large part of what has since been written concerning this disease in Europe.

The first memoir from the section of surgery is by the justly celebrated Baron LARREY, on penetrating wounds of the chest, in which he indicates the treatment he has been led to adopt, and which his prolonged experience continues to assure him is the best in such cases. We subjoin a statement of a highly interesting case, exemplifying its propriety.

Antoine C. a soldier, twenty-six years of age, was brought to the hospital on the night of the 21st of October grievously wounded. Being very much prostrated when he was brought in, on account of the enormous quantity of blood which immediately followed the wound, the surgeon who received him applied a simple dressing, gave him a cordial draught, caused his body and limbs to be warmed, and left him in charge of an intelligent nurse.

"On visiting him next morning I found him in imminent danger, he was speechless, his visage pale and disfigured, pulse scarcely perceptible, respiration short, laborious, and almost insensible, the dressings of the wound were filled with florid blood, and his debility was extreme. Carefully removing the bandages, two large wounds were discovered, opposite to each other, on the right side of the chest, which, one of the bystanders said, were made by a foot soldier's sabre, (*called spadon*,) with a very keen edge. The anterior wound was a transverse cut, situated below and a little beyond the right nipple, whence, passing obliquely backward, it traversed the centre of the right cavity of the chest. In its passage the weapon had divided a large part of the lung, and the root of the intercostal artery. The point of the sword came out at the interval of the third and fourth ribs, in the hollow of the armpit of the same side, between the anterior edge of the scapula, and the tendon of the latissimus dorsi, which was cut very close to its insertion into the humerus.

"The patient being put to bed in a separate chamber we proceeded to dress the wounds: I first dilated both wounds with proper precaution, and by introducing my finger found that they both penetrated the cavity of the chest through the intercostal space above-mentioned, but in such a manner, that the strip of intercostal muscles, interposed between the entrance and the exit of the sabre,



was cut throughout that extent, even into the thickness of the serratus; and the depth of this cut enabled us to verify the injury of the internal parts as already stated. The intercostal artery appeared to be cut off near to its origin from the pectoral aorta; nevertheless the hæmorrhage was suspended, but the vessels of the lungs still furnished a considerable quantity of florid and frothy blood. The wounds being dilated, and the blood effused into the surrounding cellular texture expelled, the wounds were united by adhesive straps covered by compress and bandage.

“Frictions over the limbs and belly, with heated camphorated oil of chamomile, were ordered: he was then enveloped in flannels, and directed to make use of mucilaginous drinks. I scarcely expected to see this patient alive at my next visit; however, in the evening I was surprised to hear him conversing with vivacity; the internal hæmorrhage had certainly ceased, and the organic functions were developed.

“On the 22d the pulse was feverish, but small, the respiration short and laborious; the patient was in a state of painful anxiety. The dressings were slightly wet with a reddish serosity, were left undisturbed, and the use of the mucilaginous drinks continued. On the night of the 23d, symptoms of irritation and inflammation coming on, the house-surgeon bled him freely, and applied a number of cups to the epigastrium, which afforded relief. On the 23d the dressings were removed; the edges of the two wounds were found united, and the patient's condition was more promising; he had expectorated during the night a considerable quantity of black blood. Respiration was less laborious, and he spoke with greater ease; the treatment was ordered to be continued, and the patient to be kept perfectly quiet. On the morning of the 24th, feeling much better, he ate a large piece of bread and meat which he had received from one of his companions, unknown to the nurse, he committed this imprudence at the moment of taking a dose of nitre whey. The stomach was immediately struck with torpor, and the patient, seized with an icy coldness, fell into a state of extreme weakness, and inexpressible distress. The attending surgeon being informed of the cause of his condition, gave him an emetic solution, which freely evacuated his stomach, but the violent efforts made in vomiting broke open the orifice of the intercostal artery, and the vessel in the lungs divided by the sabre, as in a few moments after the patient was seized with an extreme oppression, loss of speech, great difficulty of breathing, spasms, and all the signs of approaching suffocation. The corresponding side of the chest was also much distended, and the pulse disappeared. It was evident from the symptoms that a new effusion had suddenly taken place, by a renewal of hæmorrhage from the same vessels. I contented myself at present with application of dry cups to the chest, and renewal of the dressing, as we apprehended his immediate death. I perceived the urgent necessity of making a counter opening, as in the operation of empyema, but the desperate state of the patient caused me to defer it until next day. The patient was very restless during the night, but had somewhat recovered strength. On my next visit I believed the internal hæmorrhage again arrested; and I determined to perform the operation. Several physicians present disbelieved the existence of the effusion, and were extremely surprised at the operation performed in their presence, and at the quantity of fluid drawn off, which

in a few minutes filled two bowls holding about five litres, with a fluid resembling lees of wine, mixed with small clots of blood. Before operating, I took care to recapitulate the signs which characterize the effusion; such are œdematous engorgement, with blackish, (ecchymosed,) lines behind the right hypochondrium, immobility, and considerable separation of the ribs on the same side, extreme oppression, total absence of respiration in the corresponding lung, smallness of pulse and beating of the heart, which could only be felt by means of the stethoscope at the most distant point of the left hypochondrium. I was careful to empty the whole sac of the pleura, by means of a gum elastic tube. The wound was then dressed, and a very light diet prescribed.

“The patient found himself better, but his extreme debility left little hope of his recovery. Frictions of warm camphorated vinegar were frequently repeated over the whole surface, and the limbs rolled in flannel. He passed the night somewhat calmly, and on the morning of the 28th we found the dressings soaked with bloody fluid. A gum-elastic tube introduced into the wound again gave issue to about a demi-litre of serosity mixed with grumous blood.

“A repetition of imprudence caused fever, violent pains in the chest, delirium, and a paralytic affection of the lower extremities. Extensive cupping about the neck, shoulders, and dorsal region, the application of ice to the head and mustard to the feet, eventually relieved him. The wounds were dressed twice a day, and the stimulating frictions continued. All the unfavourable symptoms had disappeared by the fifteenth day, and the wounds made by the sword were cicatrized.

“The sanguinolent fluid from the opening made into the chest by the operation, changed to a laudable pus in moderate quantity, frequently mingled with albuminous and membraniform flocks, doubtless resulting from the exfoliation of the layers of the pleura surrounding the cavity containing the effusion. During the suppuration, which was prolonged for several months, he had all the symptoms of the highest degree of phthisis, sometimes with mucous diarrhœa. He was fed on mild mucilaginous diet, occasionally took small quantities of sulphate of quinine, and was especially benefited by repeated applications of moxa. We always remarked, that in suspending the febrile action, the moxa augmented the action of the organs, diminished sensibly the purulent secretion from the ulcerated surfaces of the lungs and pleura, and favoured the approximation of the walls of the chest and the process of the internal cicatrization.

We see in this patient all the phenomena observed in several others upon whom the operation for empyema has been successfully performed. Thus, in our wounded soldier, the whole circumference of the injured side is reduced to half of its original size; the curvature of the ribs is greatly diminished, and they are in immediate contact; the shoulder on the injured side is lowered; the trunk is inclined in the same direction; the heart has followed the displacement of the mediastinum to the right side, so that its pulsations are no longer perceptible on the left, but are to be felt opposite to the cartilages of the 8th and 9th ribs of the right side. The diaphragm is considerably raised on the right side with all the viscera attached to its arch. The position of the lung, remaining at the upper part of the chest, is certainly hepatized and augmented

in size, to aid in obliterating the enormous void left by the evacuation of the fluid from the thoracic cavity. The axillary nerves and vessels, enveloped in an almost inorganic fleshy mass, have produced a wasting of the whole arm; the left cavity of the chest has dilated in equal proportion to the diminution of the right, and the parenchyma of the lung has increased to twice the original dimension. The left ribs are more curved and wider apart than natural, and respiration is exclusively performed on the left side. The whole physical condition has suffered a metamorphosis, and the function of the respiratory and circulatory organs have undergone remarkable modifications, yet so happily adapted, that the life and health appear as firmly re-established as they were before the injury.

Next follows a paper by Baron Larrey, on the operation of lithotomy, in which he endeavours to show that different kinds of calculus, &c. requires different modes of operation. He publishes the history of a case in support of his views, and concludes his paper by some very interesting reflections on lithotomy in general.

The last memoir we have room to notice especially, is Baron Dupuytren's account of his treatment of artificial anus. It is a long and satisfactory paper, which would be read by every surgeon with interest. As his mode of operating is already well known to our readers, we shall dwell on the fact, that he has in this paper done tardy, though still imperfect justice to Physick, who anticipated Dupuytren's in this part of surgery. After quoting in a note what is said of Physick's operation anon in the second edition of Dorsey's Surgery, he adds—"The operation of Physick, then, like that of Schmalkalden, (performed in 1798,) consists in a *perforation* of the partition separating the two ends of the intestine made with needles, thread and loopes, and is incontestably analogous to my operation upon Aucter." Now in fact the operation by Dr. Physick is *identical* in effect with Dupuytren's, and the only difference between them is that the latter effected the division with an irregular pair of forceps, while the former did precisely the same with the ligature; differing only in the instrument—not *at all* in principle.

The papers from the section of pharmacy are long and sufficiently numerous, but we are unable to enter into farther details at present, especially as the remaining memoirs are not recommended by any very practical importance.

J. D. G.

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XVII. *A Treatise on the Nature and Cure of Intestinal Worms of the Human Body; Arranged according to the Classification of Rudolph and Bremser, and containing the most approved methods of treatment, as practised in this country, [England,] and on the continent [of Europe.]* By WILLIAM RHIND, Surgeon, Member of the Royal Medical Society of Edinburgh. Illustrated by six plates. London, 1829, pp. 142.

This is the first work upon the subject of intestinal worms, in the English language, that may be regarded by the physician and naturalist as laying claims to accuracy and finish. It is true that the external appearances, and even anatomical structure of some species have been described by Hooper



and others,\* but still much was wanted to complete the history, symptoms, and method of cure, not only of these, but of various other species met with in other cavities and textures of the body. The present treatise was intended by Mr. Rhind to supply the deficiencies existing upon this subject.

The presence of worms in various parts of animals, our author attributes to the disposition manifested by nature to multiply and support animal existence under every variety of circumstance as well as every possible situation, all beings however small, having others still more minute depending upon them for nourishment. Of these parasites, Rudolphi has enumerated no less than eleven hundred different species as found among the various classes of the animal kingdom. Of worms, some are common to several classes of animals, whilst others again frequent only one particular species. For example, the large, round worm of the human species is also to be met with in pigs, horses, and cows; whereas the two species of tape-worm found in the human body, are distinct from those of all other animals. Every different animal structure is liable to be tenanted by some species of animal, which for the most part is peculiar to it.

In support of the position that the intestinal worms of the human body are of a kind different from any of similar appearance found existing in earth or water, Mr. Rhind refers to their distinct and peculiar formation and structure, their living and propagating in the body, and their incapacity to sustain life for any length of time when removed from it. With regard to the much agitated and perplexing question of the origin of worms, our author combats the opinion held by Bremser, of their *spontaneous* formation, as contrary to all analogy drawn from nature, there being no similar instance of spontaneous production in any other class of animals. He at the same time acknowledges the very great difficulty there is in accounting for the existence of various species of worms found in certain cavities of the body, excluded from any direct external communication. "Yet," says he, "it is possible the extremely minute ovula or eggs of these animals, may be carried to these cavities by the absorbent vessels through the medium of the blood-vessels, or by some of those animals puncturing and penetrating the external skin, as is supposed to be the case with the *filaria medinensis*, or Guinea worm."

Our author maintains that a peculiar state of the body and of the intestinal canal in particular, is necessary for the development of worms, and aptly illustrates his view by a reference to the manner in which various vegetable seeds are carried about by the winds, rest themselves in particular spots which suit their nature, where they spout and shoot up. It is well known that some of these seeds may remain buried for years, and still retain their life and power of vegetating under favourable circumstances. The eggs of a silk-worm-moth put into a wooden box, and placed in a damp cellar, were kept there by Captain Brown for two years, when on being placed in the sun, they were speedily brought to the larva or caterpillar state.

The disposition in the human body which our author thinks most prone to the affection of worms, is a general laxity and debility of the whole system, but

\* Dr. Hooper's paper upon the subject, may be seen in the Memoirs of the London Medical Society, Vol. 5th.

more especially of the intestines. An imperfect digestion of the food and a deficiency of the various juices necessary for converting this food into nourishment, or an over active digestion producing more alimentary matter than the absorbent vessels can take up, are both equally favourable. This last circumstance may be the cause why robust and healthy people are sometimes found troubled with this affection. Some have entertained an opinion that the inhabitants of cities are more liable to worms than those of the country; and again, that animal food is more favourable to their production than vegetable. Bremser, however, states that he has frequently found in the graminivorous animals, great numbers of intestinal worms, and imputes the greater prevalence in the inhabitants of cities to luxurious living, want of due exercise, and consequent derangement of the digestive organs.

Relative to the influence of diet, it may be stated in a general way, that all crude vegetables and unripe fruits, especially when freely taken, as also a milk diet, and too much saccharine matter, are favourable to the production of worms. Our author likewise thinks it probable that a diet not sufficiently stimulating, as one entirely composed of farinaceous and vegetable matter, may be followed by the same consequences. Salt, from its stimulating qualities, is known to be a preventive. Lord Somerville, in his address to the Board of Agriculture, relates the following circumstance:—"The ancient laws of Holland ordained men to be kept on bread alone, *unmixed with salt*, as the severest punishment that could be inflicted upon them in their moist climate. The effect was horrible; these wretched criminals are said to have been devoured by worms engendered in their stomachs."

It is well known that the inhabitants of some countries are peculiarly liable to worms. The Germans, the inhabitants of many parts of France, the Italians, and Tyrolese, are extremely subject to the *Tænia solium* or common tape-worm. In Russia, Poland, and Sweden, again, the *Tænia lata*, or broad tape-worm prevails. The former species is most common in England.

According to the classification adopted by our author, the *first* species of worms inhabiting the intestinal canal is the *Trichocephalus dispar* or long thread-worm. This, when full grown, is from one and a half to two inches long, and about the sixteenth part of an inch in breadth. It is generally found in the large intestines, and most frequently in the cæcum. About two-thirds of its length is small or capillary, the head being situated at the termination of this small portion, from which circumstance it has derived its generic name of trichocephalus or hair-headed. It appears to have been first discovered by Røderer of Gottengen in the year 1761. The small capillary portion having then been mistaken for the tail of the animal, he named it *trichuris* or hair-tailed. The French call it *le ver à queue*. This species is oviparous, and consists of a male and female.

The *second* species is the *Oxyuris vermicularis*, the maw or thread-worm.

The male of this is commonly from a line to a line and a half in length, and about the thickness of a piece of fine thread, very elastic and of a white or yellowish colour. The female is larger and longer by three or four lines. They are most commonly found in the rectum, though met with in the cæcum and colon. Children are most subject to them.

The *third* species is the *Ascaris lumbricoides*, or long round worm, which is so common as to require no particular description. This worm is distinct from

the common earth worm, with which it has been classed. It infests the small intestines, especially the jejunum and ileum, from which it frequently ascends into the stomach and œsophagus.

The *fourth* species is the *Bothriocephalus latus*, or broad tape-worm.

This consists of a head, a chain of articulations, and a small rounded tail. Each link or articulation is broader than long. Though rarely exceeding fifteen or twenty feet, they are sometimes found more than double that length, so as to occupy the whole intestinal tract. Boerhaave mentions one, voided by a Russian, thirty yards long. Three, four, and sometimes more, have occasionally been found in the same person. The breadth varies from an eighth to a quarter of an inch.

The *fifth* species is the *Tænia solium*, or common tape-worm.

This is usually found in the small intestines, and may be distinguished from the preceding by the more irregular structure and form of the joints, which are in general longer than broad, and of an oval or irregular shape. They have been often compared in appearance to large cucumber seeds. *Tæniæ* of twenty and thirty feet long are by no means rare. The belief long entertained that only one of these worms was to be met with in the same person, gave rise to its name; but this opinion has been proven erroneous. It is generally supposed that these worms are hermaphrodite; at all events their organs of generation have never been distinctly seen. Both species of tape worm are much more common to adults than children.

Having thus given a brief notice of the five species of worms which infest the intestinal canal, in the order they have been arranged by Rudolphi, we regret that we are compelled to pass over much curious and interesting intelligence which our author has collected relative to various species of worms found in the other structures and cavities of the body.

Without specifying any of the multitude of symptoms regarded as indicating the presence of worms, we shall follow our author to his "method of cure." His chief intentions differ in no way from those of practitioners generally, namely, the destruction and expulsion of worms, and the correction of the particular states of the general system and intestinal canal which has favoured their formation.

Among the various medicines enumerated as fitted to cause the death of worms, he mentions *iced water* as capable of quickly destroying them. But inasmuch as this can only be applied in the form of enema, its use is consequently very limited. In the treatment of the two species of thread worm common to the lower portion of the intestinal canal, he observes that medicines given by the mouth are apt to lose their effects in the course of the long passage which they are obliged to take through the bowels. For this reason, injections are most to be depended on. He, however, recommends aloes, in doses of two, three, or six grains, taken every morning, since this medicine is well known to pass through the small intestines without experiencing much change, and to act particularly upon the cœcum and rectum. Dr. Bremser recommends in obstinate cases, the fumes of tobacco, or an enema of the infusion of male fern. These worms are known to increase with astonishing rapidity.

As to the other means recommended by Mr. Rhind for the destruction and evacuation of worms infesting the lower intestines, there does not appear to be



any thing sufficiently novel to merit particular notice here. The same observation will apply to the mode of treatment he recommends for the long round worm. He considers a similar method as applicable to both species of tape worm, which he looks upon as the most injurious to the system and difficult to dislodge of all others. Our author details the treatment so much vaunted by Bremser as so effectual not only in this but in all other species of intestinal worms. This consists chiefly in the use of Chabert's empyreumatic oil, which he says is composed of one part of empyreumatic animal oil, (from hartshorn,) and three parts of oil of turpentine, distilled together in a retort in a sand bath, till three-fourths come over. The taste of this medicine, he says, is nauseous, and it is apt to produce griping and very frequently irritation of the bladder and stranguery. The dose usually recommended is two tea-spoonfuls morning and night. He thinks that the chief virtue of this nostrum resides in the oil of turpentine, the efficacy of which well known vermifuge he believes may be increased by conjoining it with castor oil, as in the following formula:—*R. ol. terebinth, ʒij. ol. ricini, ʒj. mucilage g. arab. ʒss. syrup. simp. ʒss. M.* To be taken divided into two or three doses. He thinks that the addition of the castor oil confines the operation of the oil of turpentine to the bowels and makes it less apt to act upon the urinary apparatus. This medicine must be cautiously administered at first, as some may not be able to bear more than thirty drops of the oil of turpentine at a dose, whilst others may take with impunity two drachms or more. After a perseverance in this medicine, in doses just sufficient to keep up a moderate but continued operation upon the bowels, all traces of worms having disappeared, the next thing to be done is to endeavour to prevent their future formation. For this purpose, if the patient be of a weak habit, he recommends, among other prescriptions, the following draught:—*R. sulph. quinin. gr. ij. acid. sulphur. aromat. gtts. xxv. aq. fontis, ʒij. M.* To be taken morning and noon. Or this powder:—*R. carbon. ferri. ʒij. pulv. rhei. ʒss. pulv. colomba, ʒij. Mice et divid. in pulv. xii.* One to be taken twice a day, in a little jelly.

Upon the whole, we look upon the treatise of Dr. Rhind as more likely to interest the physician versed in natural history, than the practitioner who may attach less importance to the attainment of science, than to the acquirement of new practical knowledge. It seems especially adapted to aid the student in his research.

The drawings which accompany the work add greatly to its value. Indeed, without such assistance, it would be far less attractive and useful. From the facility with which accurate delineations can be multiplied by the art of lithography, it seems destined to lay our profession under special obligations. The figures in the present work represent the objects treated of, not only of their natural size, but as they appear when strongly magnified. The black ground on which they are represented, exhibits them with peculiar distinctness and almost of their proper colour.

G. E.

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XVIII. *De l'Irritation et de la Folie, ouvrage dans lequel les rapports du Physique et du Moral sont établis sur les bases de la Médecine Physiologique.* Par F. J. V. BROUSSAIS. Paris, 1828. pp. 590. 8vo.

The history of the medical art proves, that like other branches of learning,

it has had periods marked by a general and absorbing influence exercised over it by some of the collateral sciences. The almost despotic sway of some particular science over others, has been highly detrimental to their progress, and it has been an unfortunate circumstance that their proper sphere of action and usefulness has not been more undeviatingly attended to, and that each has not been restricted, where alone it could prove beneficial, and prevented from encroaching too far on the boundaries of others. Thus medical systems have put on different appearances, according to the various lights they have received from other sciences, but these reflected rays were too feeble in themselves to dispel the darkness, and have only produced illusion. Metaphysics, mechanics, and chemistry have each in turn influenced the theories and practice of the healing art; but this state of things we trust is now at an end, as medicine appears to be at last assuming the only direction that can establish it on incontrovertible principles: that of a close and sedulous investigation of the actions of external agents on the human system, and of the reciprocal relations of the organs to each other, in health and disease. It is to the lights afforded by physiology and pathology that we must look for the dispelling of the numerous errors which still exist in the practical part of our profession, as these are the only sure and certain guides to that perfection so ardently to be desired. The good effects of this method of viewing disease, are even now becoming strikingly prominent, and we are daily presented with results which a few years since could scarcely have been anticipated.

We have been led into these remarks, by the perusal of the work whose title we have just given. To the learned and indefatigable author, medicine is deeply indebted for the impetus he has given to physiological pursuits, and for the sound practical views he has taken of the effects of disease on the different tissues of the body. In the present treatise, he has endeavoured to apply the principles of physiological medicine to the elucidation and treatment of diseases of the mind; and we are sorry to be obliged to say that he has not been as successful or lucid as in his former labours. So long as he confines himself to accounts of symptoms, morbid changes, and practical precepts, the work merits great attention, but when he enters on the consideration of the mind and its properties, he becomes involved in a tissue of metaphysical subtleties, as wild and visionary as any of those which have obscured the reasonings of his predecessors.

The philosophy of M. Broussais is of the same character as that of Cabanis and Lawrence, and approaches closely to materialism: it is of course strongly opposed to the doctrines of the Scotch school, or, as he terms it, the Kanto-Platonic. The object of the work, as stated in the preface, is to claim as appertaining to the domain of physiology, all that part of the study of man which has hitherto been considered as belonging to metaphysics, and to impress on the mind of physicians the absolute necessity for a close investigation of the human intellect on physiological principles, as well as to prove the close and intimate connexion existing between diseases of the body and those of the mind.

The work is divided into two distinct parts; the first of which is devoted to the consideration of irritation generally, and is the most speculative,

and contains the exposition of the author's views as to the operations of the mind; the second is on alienation of mind, and the application of these principles to its causes and treatment. It would be impossible in the short space allotted to this notice to enter into a particular consideration of the different divisions of the work, this, however, is the less necessary, as we are fully persuaded that the importance of the subject will induce most of our readers to consult it for themselves. His leading points may be given in a few words, and will more fully display the ground he has taken than any observations we can offer.

Irritation or excitation is necessary, in the opinion of our author, to our existence; this irritation is kept up by the various agents amidst which we live, and which are constantly exercising an influence on our organs: from the surfaces of these organs, whether they are internal or external, the excitation is transmitted to the nervous system, which, by its branches, or by its centre, the brain, again reflects it through all the tissues. It is in consequence of the continual influence of the various causes of excitation that life is maintained, should these be abstracted, death is inevitable; in fact, the manifestation of all the phenomena which form what is termed life, as movement or contractibility, and the perception of this action, or sensibility, may be referred to this cause; on these two principles all the others depend, as the production of animal heat, nutrition, &c. Our author then goes on to say, that vital action, vital properties, and the *vis medicatrix naturæ* are only abstract ideas having no real existence; that the formation of the embryo is due to a kind of living chemistry, (*chimie vivante*;) and that the cerebral system is only a living matter, (*matière vivante*;) that there is no such operation of the mind as the formation of innate ideas, the only perception we have is of things. He also thinks that all the instinctive and intellectual phenomena are dependant on the action and excitation of the nervous system; that thought being a species of irritation of the brain, its essential principle depends on the irritability of the cerebral substance, hence all the moral motions are really organic, and the terms sensations, perceptions, and ideas only mean certain states or modes of excitement of the nervous system. Intellect or intelligence is not, however, an effect or result of this excitement, but is only a species of this very excitement; hence all intellectual phenomena are the result of the actions of a perishable animal substance.

It will be perceived, from the above extract, that M. Broussais is a pure materialist, attributing, in the first instance, the formation of living beings to a species of chemical process, and all the nobler attributes of our nature to a nervous irritation. But he goes farther and asserts, that man is not a free agent, that his will, as well as all his perceptions and ideas, are all influenced and directed by irritation or excitement existing in various parts of his system, or that man is in fact an automaton, all of whose actions depend on the influence of physical agents; should this doctrine, which is that of Spinoza, Hobbes, and Owen, be correct, all law and moral obligation is worse than useless, as crime could not be imputed to a being whose reason was but a species of nervous irritation, over which he had no control. But we will leave this part of the work, and proceed to the examination of the second division of it, or the application of physiological principles to diseases of the mind. We have not at-



tempted to analyze the author's ideas on irritation and inflammation, as occurring in the different tissues, and constituting disease, as these are too well known to need comment.

Chapter I. is on the Causes of Alienation of Mind.—These, says M. Broussais, may be classed in the same manner as those of all other diseases, that is to say, they depend on the influence of the vital actions themselves, and on that of other organs on the brain, but as the action of all these causes does not necessarily produce insanity, a certain predisposition must be admitted, this arises from an excessive irritability of the brain, or from its vicious development.

Chapter II. On the Incubation of Insanity.—There are two kinds, one cerebral, and the other non-cerebral; the first depending on the actions of the organ itself, and the other on the excitation transmitted by means of the nerves from other parts. Both these may be either chronic or acute. Females are more liable to alienation of mind than males, not only from their greater irritability, but also from their possessing a less development of the brain in those regions which preside over the intellectual faculties.

Chapter III. Character of Insanity.—Our author divides alienation of mind into, 1st, acute mania, of which the varieties are, *a*, acute and furious mania; *b*, acute mania without fury. 2d. Chronic mania: this is either general or partial; the last being the monomania of late authors, and the melancholia of the ancient. M. Broussais enters at some length into the consideration of this form, and divides it into many species and varieties. 1st. Monomania, founded on a perversion of the instinct, and of the physical attributes, with or without delirium; the varieties of this are—*a*. Perversion of the attribute of self-preservation, or suicidal monomania: one form, our author says, arises in most cases from disease of the stomach, also implicating the heart and lungs. *b*. Perversion of the instinct for muscular action or rest. *c*. Perversion of the natural instinct of association with our fellow beings. This perversion and that of suicide are often united; it generally depends on an irritation of the trisplanchnic apparatus, and more especially on that of the stomach. *d*. Perversion of the instinct of nutrition. This is manifested in bulimia, and in those who are fond of feeding on extraordinary and disgusting articles; this form also depends on a disease of the stomach. *e*. Perversion of the instinct of generation. This may exist in several forms. 2d. Intellectual monomanias, or those founded on the perversion of the moral faculties, and on the predominance of a single, or a series of acquired ideas. This species of monomania is also divided by M. Broussais into several varieties, as, *a*, monomania founded on self-esteem. This presents numerous forms; the persons afflicted with it believing themselves to be emperors, prophets, &c. or it may assume the appearance of inordinate vanity. *b*. Monomania from self-degradation. This form is the opposite of the last mentioned; all those affected with this variety are at the same time subject to a violent and obstinate irritation of the digestive organs; this irritation may, however, be produced from the effects of grief and terror. *c*. Monomania with gaiety. *d*. Monomania with grief and depression. This is the melancholia of ancient writers, and the lipomania of Esquirol. *e*. Complicated monomanias. These are characterised by a predominance of a series of ideas giving rise successively to the most opposite sensations. *f*. Intellectual monomanias without any predominance of internal emotions, whether agreeable or otherwise. These

are extremely numerous and diversified; the last form is that of intermittent mania; this may occur in all the above-mentioned varieties.

Chapter IV. is devoted to the consideration of the Progress, Duration, Complication, and Termination of Insanity.—This is an extremely interesting chapter, although it is one which, from its nature, will not bear analysis; we will, however, attempt to give the author's views of the natural termination of insanity. This, says he, is always in dementia and paralysis; which are announced by three classes of symptoms corresponding to the three great functions of the brain: the loss of the intellectual faculties, the loss of muscular motion, and the loss of the senses; the first constituting dementia, and the two latter paralysis; when insanity is complicated with epilepsy, the loss of the intellectual faculties takes place at an earlier period than it would otherwise have done: when insane patients do not fall victims to some acute attack, as of apoplexy, or gastritis, they generally live for a length of time, and at last perish in a miserable condition, either from general paralysis, or by some chronic affection and disorganization of the lungs or digestive organs. Those patients who are subject to rheumatic pains, are often destroyed by the formation of an aneurism of the heart.

Chapter V. Appearances on Dissection.—As may be readily supposed, the greatest alterations are to be met with in the brain, although morbid appearances are generally perceptible in other organs, particularly in chronic cases. In a late work by Dr. Burrows, is the following table of appearances presented on dissection, drawn up by Pinel, and comprehending the observations of Esquirol, Villermai, Beauvais, and Schevilgac.

No diseased appearances visible in the brain, chest, or abdomen, 65.—Apoplexy, 27.—Substance of the brain diseased, 19.—Membranes diseased, 22.—Chronic peripneumonia, 20.—Phthisis, 22.—Chronic peritonitis, 9.—Chronic pleuritis, 7.—Chronic enteritis, 50.—Bowels otherwise diseased, 13.—Liver morbid, 5.—Kidneys morbid, 3.—Ovaries morbid, 2.—Uterus, 4.—Total, 259. This table strongly corroborates the idea that many of these lesions are posterior to the development of the insanity, and have not occasioned it.

Chapter VI. Theories of Insanity.—These have been extremely numerous; Cullen, Willis, Crichton, Good, &c. believing that insanity depends on a specific diseased action of certain minute vessels, secreting the nervous fluid, whilst Portal, Dumas, Cabanis, Pinel, Foderé, &c. consider that it is owing to some morbid state of the abdominal viscera. Bayle, Calmeil, and Falret, on the contrary, are of opinion that it arises from an organic derangement of the brain or its membranes, and Bichat, Soemmering, and Majendie, have explained it by the sympathetic affinities of the ganglionic nerves. But it would be an useless and endless task to quote all the various theories which have at different times been prevalent as to the causes of alienation of mind.

Chapter VII. Theory of Insanity, according to the Physiological Doctrine.—This is an application of the principles insisted on in the first portion of the work; namely, that there are four principal forms of irritation; the inflammatory, the hæmorrhagic, the sub-inflammatory, and the nervous; of these, the latter is the most powerful, and gives rise to the others. The brain, as has been before stated, being subjected to two orders or kinds of excitations, those derived by the nerves of the senses from external objects, and those received from

the nerves of the internal organs. These excitants, if they should act with too much energy, or for too great a length of time on the principal organs, which are all abundantly supplied with nervous branches, also exercise a powerful effect on the brain, causing a morbid action and derangement of the faculties.

Chapter VIII. Prognosis of Insanity.—This is to be drawn from its causes, the constitution of the patient, the form of its attack, its progress, and its complications. That arising from accidental causes always offers a greater chance of cure than those which are caused by predisposition or long-continued morbid action or lesion of the brain. If we are to judge of the curability of the insane by the tables which have been given by different authors, it will be found that in well regulated hospitals, the proportion of cured is about one-fourth, sometimes even one-third. The curability as regards age also presents some curious results; it appears that from ten to twenty years of age, more than one-half of the patients recover; from twenty to thirty the chance of cure diminishes; this gradually decreases till in those from sixty to seventy years old, scarcely one-seventh recover. It has been remarked that women are more readily cured than men.

Chapter IX. Treatment of Insanity.—M. Broussais after adverting to the cruel and oftentimes absurd modes formerly pursued in the treatment of mental diseases, gives a sketch of that proposed by Pinel; this he thinks is too inactive, although he considers it as far superior to that of his predecessors. He then gives what he conceives as the most proper and efficient. This is of course founded on the doctrine of insanity being an irritation; this irritation is to be combated by two classes of remedies, the sedatives and the counter-irritants or revulsives, at the same time paying attention to the removal of the causes which have induced the appearance of the disease. This is the most instructive chapter in the work; it abounds in sound practical precepts, and will amply repay an attentive perusal.

The work terminates with a supplement in which M. Broussais again plunges into the depths of metaphysics; in this we shall not attempt to follow him, as we are fearful that we should not be able to give such a condensed view of his arguments as would be satisfactory. We do not wish it to be believed from what we said at the commencement of this notice, that we would wish to decry the importance of physiology as elucidating the operations of the human mind; on the contrary, we are fully persuaded that in whatever manner we attempt to view mental diseases, that the physical nature of man must necessarily attract great attention. To understand the human body, the laws by which it is governed, and its diseases, every circumstance must be taken into view, taking all our facts from nature; and excluding opinions however plausible, or supported by authority, if unsubstantiated by reason and observation. On this account we cannot, with the information we as yet possess, admit that animal life and its attendant phenomena wholly depend on the irritability of organized parts, although we fully agree that it is a very general property of these parts. Notwithstanding the strong and confident manner in which M. Broussais denies the existence of the vital principle, we cannot yet be convinced that this attribute of animated nature is a non-entity. Its effects are obvious whilst life exists, and cease on death taking place. What the nature of this sacred flame may be, is a question that will in all probability never be solved by mortal man; it is not a



lotted to him to raise this last veil of nature's sanctuary. But if we are not permitted to taste the fruit of the tree of knowledge, we are invited to shelter ourselves beneath its widely spreading branches, and are amply rewarded for our exertions in reaching it, by the multitude and beauty of the objects we discover on our way. Let us therefore be satisfied that some bound has been set to the aspiring mind of man, with the fact that his researches have elucidated many of the mysteries of nature, forced her to submit in a great degree to his sway, and made her laws and operations minister to his wants and pleasures.

R. E. G.

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XIX. *Histoire Philosophique et Médicale des Hémorrhagies, de leurs Causes Essentielles, Immédiates ou Prochaines, et des Méthodes de traitement qu'il convient d'employer dans cette classe de Maladies.* Par D. LATOUR, Docteur en Médecine, Ancien Médecin de L'Hôtel Dieu d'Orleans, &c. Tom. 2. Oct. pp. 1016. Paris, 1828.

M. Latour professes himself an adherent of the ancient régime, and as such sets out in the voluminous work under the above title, with a protest against the leaders of the present French system, for having apparently conspired to banish the consideration of proximate causes from the study of medicine, as altogether hypothetical. Now, if the term proximate cause mean that derangement or lesion in a part or organ upon which the phenomena of disease necessarily depend, his accusations against the pathologists of the present day are surely unfounded, since their efforts are mainly directed to the exploration and demonstration of all such alterations and lesions. But should M. Latour include something more than this in his notion of proximate or essential causes, we would beg leave to refer him to the example of the great Newton, who, we think, displayed his wisdom in nothing more than in limiting himself to the close observation of facts, without pretending to search into the proximate or hidden principles upon which the laws of nature are founded. Are the primary elements of disease any more tangible than those of gravity or life?

In the prosecution of his subject, M. Latour appears to have made the most faithful research into the records of his profession, and to have culled nearly every thing worthy of attention from both ancient and modern writers. He treats in detail of every variety of hæmorrhage, whether proceeding from solution of continuity occasioned by external violence or by erosion, or occurring without any apparent breach of continuity. The progress of pathological anatomy has shown that hæmorrhagies occur more frequently under the last mentioned circumstances than was formerly supposed, and that though most common from the *mucous* tissue lining the mouth, nose, eyes, lungs, intestinal canal, urethra, and uterus, they also frequently issue from the *serous* membrane forming the pleura, pericardium, peritoneum, tunica vaginalis, from the synovial membranes, and likewise into the *cellular* tissue, giving rise to sanguineous infiltrations into the muscles, brain, heart, lungs, and liver. The orifices through which the blood usually escapes where there is no solution of continuity, are the exhalents and secretory and excretory conduits.

After an examination of the opinions held by the most eminent ancient and

modern writers relative to the proximate causes of hæmorrhagies, he sums up the evidence which, with one of his illustrations, we here translate.

“According to Bichat and Pinel, it is important to know that there are two modes in which the orifices dilate in hæmorrhagies without solution of continuity. In one the dilatation takes place in an *active*, and in the other in a passive manner. It appears to me that the term *active hæmorrhage* expresses a complex idea, which includes 1st, the idea of the active dilatation of the orifices; 2d, the idea of an expulsive effort by the augmentation of the vital properties of the sanguineous vessels; 3d, the idea of an extraordinary moving principle, or augmentation of the vital properties of the sanguineous fluid itself. Now, may not these three conditions be found sometimes associated, sometimes separate, sometimes variously combined?”

“I believe that I have seen them united in a young man of athletic constitution, with whom, during a nasal hæmorrhage, every symptom announced a general elevation of the vital forces; the general fever, the violence of the fluxionary movement towards the head, the effervescence of the blood which issued in large drops; in fine, the abundance and nature of the hæmorrhage which, triumphing over all the remedies used, and even plugging up, ultimately causing the death of the patient in twenty-four hours.”

The following remarks relative to what M. Latour terms the *hæmorrhagic derivation*, are curious if not important. It may, however, be first proper to explain that by this term he appears to mean a determination of the blood to some particular part, as for example, towards an opening made in a blood-vessel, or the seat of a stimulating application.

“Several modern observers have believed that the blood in its derivation, did not always follow the laws of the Harveian circulation. An author of the middle of the last century observed that if a vein was opened in a living animal, the blood flowed and directed itself towards the puncture, contrary to its usual course. The edges of the orifice then became red and swelled, a circumstance which ought to lead to much caution in the use of blood-letting as a derivative; since if the blood be taken from near the spot which is the seat of inflammation, the effect would certainly be to bring more blood into the part. Mercatus has shown the inconvenience of this practice in falls and blows, and proved that in such cases the bleeding should be made from a distant and almost opposite part.”

We doubt whether many of our readers will sustain such a practice, however plausible the theory.

Our author dwells much upon another determination of the blood, to the consideration of which he attaches the greatest importance, namely, the *fluxionary hæmorrhagic movement*. This differs both from the ordinary motion of the circulation, and from that which constitutes the hæmorrhagic derivation. He illustrates it in the following manner:—

“If an incision be made with a lancet in some part of the capillary system, only a few drops of blood will be found to escape, because in this case there are no other movements than the one which is proper and ordinary to the circulation, and that which we have already said constitutes the hæmorrhagic derivation. But if the same operation be performed by a leech, the puncture will become irritable and painful, followed by an afflux of blood from all the neigh-

bouring parts, that is to say, a *hæmorrhagic fluxionary movement*. Should all the blood thus drawn escape through the puncture made by the leech, there will be a hæmorrhagic fluxionary movement without hæmorrhagic congestion. But, if on the contrary the orifice is insufficient to permit the escape of all the blood, it will accumulate in the vicinity, distend the vessels, become red, swell, render the part it occupies painful, and there will be *congestion* and *hæmorrhagic fluxionary movement*."

This movement M. Latour considers generally only a local excitement of the sanguineous system, a direction of the circulation towards a certain point. Occasionally, however, it is to be considered in some degree as general.

When, in order to restrain or check the violence of the fluxionary movement, general blood-letting is resorted to, as in cases of plethora, our author thinks with Mauriceau, that the intention may be fulfilled with the greatest advantage, and without producing debility, by closing the orifice at intervals during the operation. He mentions a case where this plan was attended with singular success in curing a quinsy in a young man who could not bear the loss of much blood. The operation was so managed that the blood escaped from the vein drop by drop for six hours, which ultimately produced the desired revulsion.

He thinks leeching and cupping highly useful revulsives, especially as they are less debilitating than general blood-letting. Leeches establish a fluxionary movement which continues a long time after their application, whilst cups are still more efficient from the pain and irritation which they excite.

Various irritants are likewise resorted to for the purpose of counterbalancing the primary fluxionary movement. Of these there are applied *externally*, blisters, sinapisms, baths, issues, frictions, &c.—*internally*, vomits, purgatives, sudorifics, diuretics, &c.

Various opinions have been held relative to the best situation for the application of revulsives in hæmorrhagies. Our author holds that they should be applied near the seat of the fluxionary movement, unless there be particular organs having a stronger sympathetic connexion. This seems to us much at variance with other conclusions drawn by him. It is not, however, the first inconsistency of which he is apparently guilty.

Upon the subject of the internal use of astringents so commonly resorted to in this class of diseases, M. Latour quotes the following opinions, derived from the school of Montpellier; namely, that they are generally injurious when there exists strong excitement of the sanguineous system, and can only be exhibited with safety when the strength of the patient begins to be exhausted. Given in small doses for the purpose of checking local congestions, they are particularly injurious, by producing a general constriction, transcending that which is local; whilst, administered in large doses, they may act as *perturbateurs*. When, however, the fluxionary movement has become feeble, the astringent compression acting primarily upon the first passages, is promptly transmitted to other parts by virtue of a sympathetic communication.

If no circumstances exist to countermand their employment, such as plethora, &c. our author approves of emetics, but thinks that vomiting might be highly injurious in case the fluxionary movement was general and in full force. Too much debility, on the contrary, contraindicates their employment. The other



evacuating medicines, such as purgatives, diuretics, and sudorifics, ought, he says, to be regarded as excellent revulsives, in consequence of their acting upon different organs than those from which the blood runs. When the fluxionary movement is local, the stronger kinds may be chosen; but as soon as this becomes general, those which increase the action and produce a general commotion of the system, should be avoided. Extreme weakness ought always to contraindicate the employment of evacuants. As purgatives increase the fluxionary movement towards the uterus, they are not proper in hæmorrhages of this organ.

A large portion of our author's second volume is occupied with the consideration of *hæmorrhagic fever*, a term he applies in a general sense to all cases where fever exists either as a cause or product of hæmorrhage. This fever he views under four principal heads; 1st. As existing previous to the hæmorrhage; 2d. As following it in a longer or shorter time; 3. As existing at the same time; 4. In the character of an adynamic, ataxic, or slow hectic, consequent upon a profuse hæmorrhage. The general characters of this fever are explained in the following extract:—

“Several authors have in vain attempted to fix the form and duration of the hæmorrhagic fever. Sometimes it is scarcely perceptible; sometimes it rises to intensity; at others it is continued, or presents exacerbations and remissions. Its duration is not less variable than its form, &c.” We subjoin a few words relative to its treatment. When the fever runs high, it may be diminished by blood-letting, diluting drinks, nitre, and perfect repose. With some precautions bleeding is to be regulated by the same rules given under the head of fluxionary movement. To show that a vein should not be opened during the formation of a hæmorrhagic crisis, our author cites a case from Hoffman, wherein bleeding under such circumstances proved fatal.

M. Latour considers nitre the refrigerant *par excellence*, possessing the property of diminishing the febrile and fluxionary movements.

Under the head of *hæmorrhagic congestion*, he approaches so near upon the territories of inflammation, that we doubt whether upon close investigation he would be able to sustain his title to the ground. He says a good deal upon the subject of hæmorrhagies originating from a sympathetic influence producing derivation from one organ to some other organ or part, as from the uterus in suppression of the menses, to the liver, spleen, lungs, nose, &c.

Under the title of *la gêne de la circulation*, he treats of hæmorrhagies depending upon obstruction of the blood in its ordinary course, as for example, from some impediment in the spleen, liver, pancreas, lungs, uterus, ovaries, &c. occasioned by various causes, such as scirrhus, compression, malconformation, &c. The work concludes with various considerations relative to atony of the solids, and alterations in the qualities of the blood.

G. E.

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XX. *Du Degré de Compétence des Médecins dans les Questions Judiciaires relative aux Aliénations Mentales, et des Theories Physiologiques sur la Monomanie.*  
Par ELIAS REGNAULT, Paris, 1828. pp. 207. 8vo.

There are few subjects appertaining to the medical art, which have been more completely overlooked in this country, than those connecting it with the ad-

ministration of justice. This is the more remarkable, since daily experience most clearly demonstrates how much the fame and usefulness of a practitioner depends on a thorough and intimate acquaintance with subjects, which, although not called into play in the treatment of disease or alleviation of suffering, are highly necessary parts of his professional acquirements. This neglect has and will continue a reproach to physicians, so long as they rely on the resources of a general knowledge of the principles of medicine as fitting them to examine and decide on questions of judicial inquiry. The extraordinary contradictions and discrepancies which so generally mark the testimony of medical men, when called on in the capacity of witnesses, are unfortunately but too well known to need comment; we may, indeed, safely affirm that there are but few instances in which physicians have been examined before a court of justice that have not tended to throw obloquy and discredit on the profession generally, and, in a majority of cases, to weaken that personal respect and reliance on their skill which had been previously entertained.

This is peculiarly the case in questions of insanity, for when a physician is summoned as a witness on such occasions, he is examined not only as to his knowledge of a particular occurrence, but his opinion on the results, consequences, or causes of that occurrence is also required, and on this opinion, whether false or well-founded, proper or erroneous, much may depend. It is this liability to be called on to elucidate or substantiate theories, as well as to testify to facts, that renders the situation of medical witnesses so embarrassing and irksome, and creates a strong disinclination in most members of the profession to discharge this important part of their duties towards society. But, whatever may be our feelings or sentiments as regards the office, it is one we are not only obligated to discharge, but it is also one from which there is no means of evasion; hence the absolute necessity of being fully prepared to explain every fact and opinion having any bearing on or connexion with our professional pursuits. It has, we are well aware, been often asserted, and, we must confess, with some degree of apparent plausibility, that any physician who is well versed in the general principles of his art must be perfectly competent to fulfil these duties, but no opinion is more erroneous, and is more fully disproved by actual experience. A perusal of any report of trials in which physicians have acted as witnesses, will serve to convince the most prejudiced that however able and skilful medical men may be in the daily routine of their professional duties, they are but too often woefully deficient on those points which so often become the subjects of judicial investigation.

M. Regnault, the author of the work, the title of which stands at the head of this article, is an advocate in the royal court of justice in Paris, and of course presents a different view of the subject from what has hitherto been given. From actual experience and observation, he is of opinion that the consulting of physicians in cases of alleged insanity, arises more from respect and long-established custom, than from any peculiar information or light they can throw on the subject. Indeed, he goes so far as to re-echo the assertion of Dr. Coste, that any man of clear intellect and judgment is as fully competent to decide on questions of this nature as Pinel or Esquirol, from having the advantage of being wholly free from a theoretical bias. Although far from allowing the truth of this general attack on the

knowledge and capacity of our profession, as witnesses in cases of insanity, we are obliged to concede that there is much truth in the allegation, for although much has been accomplished within the last few years in the elucidation and discrimination of mental diseases, they still remain involved in great obscurity. We now allude particularly to those cases where the alienation of mind is occult, or is undistinguishable by the world generally, and it is only in such states that medical evidence is absolutely necessary. When it is apparent and glaring, there is little use in summoning a medical man, as every bystander is as fully capable of deciding as himself.

The observations of M. Regnault are strongly corroborated by the result of a late trial in London, on a commission of lunacy issued against a gentleman of seventy-seven. In this case a great number of medical witnesses were examined, and, as usual, contradicted each other in the most direct and positive manner. Many of these witnesses were gentlemen who had been attached for many years to lunatic asylums and hospitals, presenting them with the amplest opportunities of becoming acquainted with alienation of mind in all its forms, yet with these advantages the report of the trial presents a tissue of glaring absurdities and discrepancies of opinion. Even Dr. Haslam, who has written so much on the subject of derangement, delivered the most extraordinary and contradictory testimony, after asserting that the person was *non compos*, yet goes on to say "that if he were to commit murder he, (Dr. H.) would find him guilty, and see him hung afterwards." But there were other facts which were developed, which we are afraid would be equally the case in this country. Thus, when many of the medical witnesses were asked if they knew what were the sentiments of the most eminent writers, both ancient and modern, on the subject of insanity, they were obliged to declare their total ignorance of them.

The opinions of medical authors on the nature and seat of insanity are at great variance with each other, and are summed up with great ability by M. Regnault. We shall attempt to give his analysis in as few words as possible. The humorists, as Galen, Boerhaave, Van Swieten; &c. and the animists, as Stahl and Van Helmont, have each established systems founded on their peculiar doctrines. Hence, at one time the bile, blood, and other fluids enacted an important part, whilst at another every thing was attributed to the influence of the *archæus*, to the vital principle or animal spirits. Crichton considers insanity as a disease of the nervous fluid, whilst Pinel is of opinion that the primitive seat of alienation of mind is in the stomach and intestines, whence the irritation is transmitted to the sensorium. Esquirol observes, "Sometimes the extremities of the nervous system, sometimes the digestive canal, at others the liver and its dependancies are the seat of the disease." Foderé thinks that the vital principle is the seat of insanity. Georget, on adopting the ideas of Gall, is of opinion that insanity is a peculiar affection of the brain, whilst at the same time he agrees that the organic alteration which occasions it is unknown to us; and, finally, the two latest writers on the subject, Bayle and Calmeil, differ very widely in their ideas as to the parts of the brain which become affected, but our limits will not permit us to follow M. Regnault in his view of the theories of different authors as regards some of the species of insanity.

The subject of monomania has attracted great attention in France, within the last few years, and has been ably discussed by Esquirol and others, particularly



that species of it termed *monomaniac homicide*, "or a partial delirium characterized by a greater or less impulse to the commission of murder." This variety appears to have been very common in the above-mentioned country, as the records of the public tribunals are filled with details of trials for murder, in which the insanity of the accused was allowed as a mitigation of the offence. After discussing the subject at some length, M. Regnault comes to the following conclusions. "That physicians have improperly given the name of monomania to excesses of the passions. Monomania homicide ought not to be admitted as a plea of justification. Even if this affection really existed, it should not be allowed to have any influence on the verdict; for either insanity consists in the predominance of several erroneous ideas, when it is not monomania, or it is constituted of a single predominant idea, existing previous to the commission of the murder, hence it is not monomania homicide, for the idea of the murder is only the consequence of the erroneous pre-existing idea, and that of the destruction of a fellow being does not constitute the disease, it is but a symptom and consequence of it."

In fact, M. Regnault is decidedly of opinion that the partial delirium known under the name of monomania, should not be allowed as a justification or excuse for the commission of a criminal act. His arguments are certainly ingenious and well arranged, but they fail in convincing us of the truth of his doctrine; we cannot agree with him that it is a false humanity to spare the life of a murderer on the plea of insanity, or that it will have the effect of making murders more numerous.

R. E. G.

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XXI. *Myology, Illustrated by Plates, in four parts. Part I. Muscles of the Anterior part of the Thigh, Leg, and Foot. Part II. Muscles of the Anterior and Posterior part of the Arm and Hand. Part III. Muscles of the Abdomen and Back. Part IV. Muscles of the Face and Eye, Anterior and Posterior part of the Neck, with the Muscles of the Perineum, completing the whole of the muscles of the Human Body.* By EDWARD WILLIAM TUSON, House Surgeon to the Middlesex Hospital. London, 1825, folio, pp. 8. Plates.

A *Supplement to Myology, containing the Arteries, Veins, Nerves, and Lymphatics of the Human Body, the Abdominal and Thoracic Viscera, the Ear and Eye, the Brain, and the Gravid Uterus, with the Fœtal Circulation.* By EDWARD WILLIAM TUSON, Lecturer on Anatomy and Physiology, Member of the Royal College of Surgeons in London, &c. &c. London, 1828, folio, pp. 9. Plates.

These are large and showy works, having plates of a "peculiar construction," made up of numerous layers, exhibiting the figures and relations of parts as accurately as can be done by drawings on paper. Thus, each plate is decomposable, and by raising the external figure we see the parts lying beneath; by lifting the second, we see a third, and so on successively to the bone. The figures are generally accurate and are done from drawings on stone. The colouring of the work is sufficiently well done to be of assistance to the student in discriminating the different textures and organs, though it can lay small claim to notice as an imitation of nature. Some of the plates, especially the more complex, are not equal in execution to those of the muscles; but allow-

ing for the difficulties of the enterprise, the whole work is creditable to its author, who appears to be a zealous and devoted student of his profession.

The importance of such a set of plates to surgeons or physicians having but few opportunities of renewing their anatomical researches, is sufficiently obvious. As a remembrancer of the succession and relation to parts upon which operations are to be performed, or as affording the means of forming a judgment of the displacements, &c. caused by luxations; their utility is equally conspicuous. To students who have attended lectures, or witnessed dissections, these plates may afford much assistance in acquiring correct general ideas of the muscles, &c.

Such plates are applicable to another purpose, which we believe might be made of great benefit to the interests of science and humanity. Judiciously used, they would enable physicians to give their verbal description, and by teaching them something of anatomy, awaken the minds of the public to a proper sense of its importance and to the necessity of giving the study every proper encouragement. It is now thoroughly proved by experience that the system of making a mystery of anatomy and anatomical researches is totally wrong, and that the more the public mind is enlightened on the subject, the fewer are the obstacles raised to the prosecution of the science. To gentlemen who have libraries, and especially to such as are devoted to the liberal professions, we would take the liberty of recommending them to obtain a copy of Mr. Tuson's fine representations of the human structure.

Mr. Tuson speaks as if he might hereafter attempt some other parts of anatomy in the same style. We heartily wish him success in so laudable and useful an enterprise.

The two volumes may be procured of Mr. J. Dobson, No. 108, Chesnut street, for the moderate price of fifty dollars.

J. D. G.

XXII. *Gemeinsame deutsche Zeitschrift für Geburtskunde, von einem Vereine von Geburtshelfern.* Herausgegeben durch D. W. H. Busch, L. Mende, und F. A. Ritgen. Band 3. Heft 2. Weimar, 1828.

This general journal of midwifery is published in numbers containing from twelve to fifteen sheets, as the editors deem necessary; three numbers form a volume; the price of each number varies according to the amount of matter and the plates necessary for its elucidation. No time is specified for the appearance of the journal, which is issued as soon as sufficient materials are collected. The number before us contains thirteen and a half printed sheets, with three plates, and the price is one rix dollar eighteen groschen. Three volumes have already been published.

The contents of this number are as follows:—1st, A long and interesting paper by Dr. F. A. Ritgen, on excessive distention of the abdomen in pregnancy; 2d, Description of a pair of obstetric forceps, invented by Dr. L. Mende; 3d, A case of Cæsarian section rendered necessary by malacosteon, by Dr. Von Busch; 4th, On the use of Ergot, by Dr. Glasor; 5th, View of the cases occurring in the Lying-in Hospital at Cologne during the year 1826, by Dr. Merrem; 6th, Account of the cases in the Lying-in Establishment of Mauburg, from

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the 1st of May, 1823, to the 30th of April, 1824; and from the 1st of May, 1824, to the 30th of April, 1825, by Dr. Busch. These papers are followed by an ample survey of the literature of obstetrics, during the period elapsed since the appearance of the preceding number, and a history of the institution in Fulda for the instruction of midwives, by Dr. Adelmann.

The lateness of the period at which this journal came to hand renders it impossible to follow our usual practice of giving extracts from the papers. To remedy this defect we may present in our next periscope such summaries of the most interesting articles as will be useful to our readers. J. D. G.

XXIII. *Transactions of the Medical Society of the State of New York, for the year 1829. With the Annual Address.* By T. ROMEYN BECK, M. D. President of the Society. Albany, 1829, pp. 20, 8vo.

The principal subjects brought before the society at its annual meeting this year, were, the establishment of a state vaccine institution—the pecuniary embarrassments of the College of Physicians and Surgeons of the State of New York—Intemperance—the evils arising from the want of some regulation to govern the vending and preparing medicines by ignorant and careless apothecaries—and the prevention of the passage of a law providing for the licensing of “steam doctors.”

The following prize questions were proposed for the year 1830. “1st. The history, preparation, and medical uses of iodine.” “2d. The nature, symptoms, causes, and treatment of delirium tremens, illustrated by cases.” A premium of fifty dollars is offered for the best dissertation on each of the above subjects. The dissertations must be forwarded to Albany on or before the 1st of December next, accompanied with a sealed paper containing the name of the author, and endorsed, as well as the dissertation, with the same motto.

Drs. John B. Beck and James McNaughton were elected delegates to the Medical Convention at Washington, in 1830, to revise the Pharmacopœia.

The following officers were elected for the ensuing year: Dr. T. Romeyn Beck, President; Dr. Henry Mitchell, Vice President; Dr. Joel A. Wing, Secretary; Dr. Jonathan Eights, Treasurer.

The annual oration, which was delivered by the President, Dr. T. Romeyn Beck, is a very interesting one. The subject of it, is the improvement of medicine, and the first illustration given “is the distrust which is obtaining against general theories.” We look upon this distrust, more particularly as a proof, of the imperfection of our science, and should have first cited as an evidence of its improvement, a fact which the author has entirely omitted, viz. a distrust which is really obtaining against medical facts and medical experience. It was truly said by Cullen, “that there are more false facts in medicine than false theories.” We yield our full assent however to the following observations. “There is no theory,” says Dr. B. “ever yet promulgated, which is not based on some portion of positive truth. Indeed it could hardly have been otherwise. The founders were men of vigorous intellect and of keen observation. They drew from their own stores, and were only wanting in that universality of knowledge which is essential to the formation of a perfect system—they seized on some prominent phenomenon, and after examining it with skill and acute-



ness, made it the ground-work of their superstructure. In the devotion so natural towards a favourite opinion, other facts no less striking, were either unheeded, or diminished in value to their mental view. Thus the basis was frequently narrow and contracted, but not, as some are fond of asserting, imaginary."

Dr. Beck appears not to be a convert to physiological medicine, but as he offers no specific objections to it, we cannot attempt its defence. He renders full praise to Bichat for his labours, in which we cordially join; as also with his observations on the powerful and often deleterious effects of vegetable remedies. We cannot, however, unite with him in his extravagant eulogium on mercury.

"As to mercury," he remarks, "I will only say, that if there be a single drug, that in human hands has proved a most distinguished curative means, it is this. That its effects may be occasionally uncertain or injurious, is only to repeat that there are peculiarities of constitution for which the wisest cannot be prepared—or that there is a malignancy in some diseases which no human effort can counteract. But who will deny its positive utility? Look at the thousands whom, not only in tropical climates, but in our own country, it has saved from that fell destroyer of our race—fever. Look at the numerous inflammations it has checked or dissipated. Look at the tens of thousands whom it has saved from the consequences of vice."

Although in the habit of prescribing it almost daily, estimating it as one of our most valuable medicines, and free to confess that if deprived of it, we should often be at a loss for a substitute, yet so fully convinced are we of the injurious effects that have been produced by its indiscriminate and improper administration, that we are not satisfied whether it would not have been better for the human race if this preparation had never been discovered. If many lives have been prolonged by its judicious administration, not fewer have been destroyed, or their existence rendered a misery, by its mal-administration.

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XXIV. *An Epitome of the Physiology, General Anatomy, and Pathology of Bichat.* By THOMAS HENDERSON, M. D. Professor of the Theory and Practice of Medicine in the Columbian College, Washington City. Philadelphia, 1829, pp. 326, 8vo.

The works of Bichat have been said, by one of our colleagues, with his usual felicity of expression, to be "a revelation in medicine." Their merit is, however, so generally admitted, and we have already so often expressed our opinions on the subject, that it is unnecessary here to pronounce their eulogy. They constitute the only basis of sound medical principles, and the student should commence his studies by making himself familiar with them. They are, however, so voluminous, that few students will devote to their perusal the time necessary for that purpose. Professor Henderson has attempted to remove this difficulty, and has prepared an epitome of all the writings of Bichat, and by selecting only the more important principles, and omitting many of the illustrations, he has been able to condense them into a small volume. This work, if it will not supersede the necessity of referring to the original, will nevertheless be of great advantage to the student; it will enable him to acquire in a short period, a knowledge of the fundamental principles of general anatomy, will inspire him with a fondness for the subject, which will induce him hereafter to consult the original,

and it will enable country practitioners, who are not familiar with Bichat, and who are unwilling now to return to the study of the rudiments of their profession, at least to teach them to their pupils.

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XXV. *A System of Dental Surgery. In three parts. Part I. Dental Surgery as a Science.—II. Operative Dental Surgery.—III. Pharmacy Connected with Dental Surgery.* By SAMUEL SHELDON FITCH, M. D. Surgeon Dentist. New York, 1829, pp. 568. 8vo. With 3 plates.

A complete system of Dental Surgery has long been desiderated. In this country especially, where, except in a few of our large cities, the medical practitioner is compelled also to practice dentistry, the want of such a work has been much felt. We have, it is true, some excellent tracts on several of the affections of the teeth, but few attempts ever have been made at furnishing a complete monograph of the diseases of these organs, and their treatment. The best is perhaps that of Fox, but it is already a quarter of a century since it appeared, and it is of course in some degree antiquated; moreover it is too costly to be accessible to the profession generally. The work of Dr. Fitch does not entirely supply the desideratum, nevertheless it will be useful. It is principally a compilation, but the selections appear to have been made with judgment, and display great industry, as a vast number of works having been consulted, and are quoted: it is modestly written, and contains a greater amount of information on the subject of which it treats, than is to be found in any other single work that we have met with.

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XXVI. *Description of the Distinct, Confluent, and Inoculated Small-Pox, Varioloid Disease, Cow-Pox, and Chicken-Pox. Illustrated by 13 Coloured Plates.* By JOHN D. FISHER, M. D. Boston, Wells and Lilly, 1829. pp. 73, folio.

The paintings from which the plates\* in this volume are engraved, were made at the hospitals of Paris, during the years 1825 and 1826, a period at which the variolous disease prevailed epidemically in that city. They were executed by a French artist, under Dr. Fisher's immediate direction, and were all begun and finished at the bedside of the patients from whom they were taken. The eruptions are exhibited in their different states of development, so that the observer may not fail, in some stage of their progress, to identify them in the living subject with their representations in the plates.

The text contains a description of the plates and of the diseases represented in them; and to facilitate the diagnosis as much as possible, a comparison is instituted between the symptoms and characters of the small-pox and varioloid, small-pox and chicken-pox, and cow-pox and inoculated small-pox.

The profession are under obligations to Dr. Fisher for this work, and we trust he will be remunerated for the expense and labour it must have cost him. It is splendidly got up, and the cost, comparatively, is very moderate.

\* Except the last, which contains representations of the chicken-pox, and the perfect and imperfect cow-pox in their different stages.

## QUARTERLY PERISCOPE.

### FOREIGN INTELLIGENCE.

#### ANATOMY.

1. *Case in which the Uterus was wanting.*—"Dr. BRESCHET relates that last February a young woman, with fistula in ano, and who, from examination, appeared to have no uterus, applied to M. Dupuytren for admission into the Hôtel Dieu. She had never had the menses, yet she always experienced the symptoms which precede their periodical return. The pelvis was rather narrow, but the breasts and the external parts of generation were well developed, and her general appearance quite feminine. The vagina terminated at about an inch from its orifice, in a cul-de-sac, smooth and circular, with no indications of a uterus. The rectum was explored, but it led to no discovery.

"This female had been living several years in concubinage, and was to be married on her recovery from the fistula.

"The operation was performed by M. Dupuytren on the 28th February last, and she died of acute hepatitis on the 15th of the following March.

"The body was most carefully examined. The pleura, lungs, and liver presented various traces of inflammation; and the left kidney contained a fibrous cyst, full of a white and inodorous fluid. The clitoris and labia were well developed; but M. Dupuytren thought the cavity which occupied the natural situation of the vagina was the effect only of the efforts at coition. Above and behind the bladder were seen what appeared to be the broad ligaments of the uterus, in which were discovered Eustachian tubes and ovaria of a large size. There was no matrix; but where the tubes joined, their diameter was slightly augmented; yet this part had no cavity, and did not in the least resemble the uterus."—*London Medical and Physical Journal for November, 1828, from the Repert. d'Anat.*

2. *Anomalous distribution of the Vascular System in a New-born Child.* By PROFESSOR MENDE.—The subject of this case died immediately after birth, without any apparent cause. The vessels were injected, and on dissection it was observed that the umbilical vein, instead of dividing into two branches to traverse the liver, continued in a single trunk over the convex surface of the right lobe of this organ, to the right auricle of the heart where it terminated before and above the orifice of the inferior vena cava. The heart appeared pushed downwards by the insertion of this insulated vessel; its base was much inclined to the right and towards the sternum, and its position was of course more transverse than usual. A single umbilical artery arose from the aorta near its bifurcation, and passed over the left side of the bladder towards the umbilicus. No other anomaly was observed.—*Archives Générales, Dec. 1828, from the Nova Acta Phys. Med. Acad. C. L. C. Nat. Cur. 1827.*

3. *Singular Biceps Muscle.*—Mr. C. M. BARNETT states, in the *London Medi-*



*cal Gazette*, for December last, that he met with one instance in which, in the right arm, instead of there being a biceps muscle having two origins, there was simply a one-headed muscle arising from the coracoid process. No tendon could be found passing through the joint answering to the long head of the biceps, neither was there any appearance of a bicipital groove; the capsular ligament was, perhaps, thicker than ordinary.

4. *Recurrent Laryngeal Nerve*.—It is generally stated by anatomists, that the distribution of the recurrent laryngeal nerve in the interior of the larynx is confined to, the crico-arytenoideus posticus, crico-arytenoideus lateralis, and the thyro-arytenoideus muscles, and that none of its filaments extend to the other muscles of the larynx. Majendie seems to attach considerable interest to the limited distribution of this nerve, asserting that it is entirely restricted to the three muscles above mentioned. Cloquet has made a similar assertion; and Mr. Bell affirms that the termination of the recurrent nerve is exclusively confined to the muscles just named, and to the mucous membrane of the larynx. Mr. G. RAINEY, in a communication in the *London Medical Gazette*, for December last, says, that in repeated dissections of the human larynx, he has uniformly been able to trace a branch to the arytenoideus transversus and the arytenoidei obliqui muscles.

5. *Proper Nerve of the Tensor Muscle of the Tympanum, or of the Internal Muscle of the Malleus*.—All anatomists have hitherto admitted that this muscle receives a nervous filament from the portio dura; but an attentive examination shows that it possesses a special nerve, furnished to it by a ganglion adhering to the inferior maxillary nerve. At the posterior and inferior part of the lower maxillary foramen, there is a rather large, irregular ganglion of a grayish red colour, strongly adhering to the inferior maxillary nerve; at the posterior and superior part of this ganglion arise two nervous filaments; the first, or the superior, already known, contributes to form the nervous anastomosis of Jacobson; the other, or inferior filament, is appropriated to the tensor muscle of the membrana tympani; it passes backwards, and a little upwards, and after a course of three or four lines, gains the internal and posterior surface of this muscle. Where the latter becomes fleshy, this nerve divides into many small filaments which penetrate between the muscular fibres, and are there lost. This nerve corresponds to the internal part of the middle meningeal artery, and to the superior part of the Eustachian tube, where the osseous portion of this canal unites with the cartilaginous; it is situated below the nervous filament that contributes to form the anastomosis of Jacobson, with which it is parallel, and above the spinous apophysis of the sphenoid bone.—*Journal des Progrès, Vol. XII. from the Répert. d'Anat. Tom. VI.*

## PHYSIOLOGY.

6. *Circulation, Absorption, and Secretion*.—Some very interesting experiments in relation to these functions have lately been performed by M. E. HERRING, Professor in the Veterinary School at Stuttgart. They were made upon horses, and consisted in the transfusion into the current of the circulation of an innocent substance, easy to recognise by proper chemical tests. The blood was then drawn at determinate intervals from other parts of the body than those at which the introduction had been made, and upon examination and comparison of the time occupied by the substance in passing from one vessel to another, an attempt was made to ascertain the precise degree of velocity with which the blood circulates. The substance chosen was a solution of the hydro-protocyanate of potass, which, with the proper precautions, may be mixed with the blood in considerable quantity, without occasioning the least inconvenience. It

is, moreover, easily detected in either the solids or fluids of the body. As a test for this purpose, the sulphate of iron was found preferable to the sulphate of copper, or the hydrochlorate of iron. In order to procure an immediate blue precipitate with the first named agent, it was only necessary to add after it a little of the hydrochloric acid. By this means the hydrocyanated ferruret of potass could be distinctly detected, though diluted in twenty thousand times its volume of the serum of the blood.

Previous to giving the results of the experiments performed by M. E. Hering, it may be well to observe that for the purpose of making the transfusion into a vein, he preferred a funnel to a syringe. The pipe of a large syringe furnished with a stop-cock, being adapted by means of a screw to a brass funnel, holding about two ounces, and the pipe inserted into the vein, the funnel was filled, the cock turned, and the liquid being thus allowed to pass into the vessel, care was taken to close the stop-cock in time to prevent the access of air. The following conclusions are furnished by our experimentalist:—

1. A solution of hydrocyanated ferruret of potass introduced into the jugular vein of a horse, reaches that of the opposite side in from twenty to twenty-five seconds; the opposite external thoracic in from twenty-three to thirty seconds; the great saphena in twenty seconds; the external maxillary artery in from ten to twenty-five seconds; the metatarsal artery of the hind foot in from twenty to forty seconds. It is to be observed that all the vessels just mentioned are of the side opposite to that where the transfusion was made. If the liquid introduced into the veins is moved by the same impulse as the blood, that rapidity with which both are conveyed should be equal. The velocity of motion, however, does not appear to be increased in proportion to the increased rapidity of the pulse, since with different horses, the pulse in which varied from thirty-six to fifty-two, the results were similar.

2. The hydrocyanated ferruret of potass is secreted by the serous membranes with great promptness, but in small quantity. The proportion of this secretion is regulated by the distance of the membranes from the heart, being greatest in those which are nearest. Thus it operates, first upon the internal surface of the pericardium, then successively upon the pleura, the peritoneum, and finally upon the articular capsules of the extremities. The cavities of the ventricles of the brain have only been examined in a few instances, in which no trace of the saline solution was found in them. In the other serous cavities, the time which this solution takes to manifest itself, varies between two and fifteen minutes after its introduction. And these were the last moments in which the animals showed signs of life.

3. In the mucous membranes, the secretion does not take place so soon as in the serous. The foreign substance is, however, after some minutes, discernible on their surfaces. The mucous membrane of the right half of the stomach secretes more promptly, and in larger quantity than that of the intestines, which in turn manifests it sooner than the mucous membrane of the lungs. The secretion takes place still more slowly upon the genito-urinary surfaces, as the portion of hydrocyanated ferruret of potass met with in the urinary passages, proves to be only the secretion of the kidneys. The mucous surfaces covered with a distinct epithelium, (the buccal cavities, the œsophagus, and right half of the stomach in the horse, for example,) offer no trace of secretion from the saline solution transfused.

4. It is difficult to recognise the foreign substance in the liver, spleen, thyroid gland, and certain other glandular organs, in consequence of their darkish colour. Numerous observations seem to show that the salivary glands take a moderate part in its elimination.

5. The kidneys, on the contrary, are employed very actively in this secretion. These organs have always in the course of a minute given decided manifestations of the substance in some part of them. The passage of the urine into the bladder requiring some time, it follows that this organ does not exhibit traces of the hydrocyanate until after a longer interval.

6. The presence of the salt in the lungs is not quite so distinct as might be supposed. Is this attributable to the colour of the organ, or is the passage of the hydrocyanate too rapid to allow the vesicles to attach themselves to the sides of the vesicles, or be excreted by them?

7. In some cases, the saline secretion adheres to the internal surface of the blood-vessels, where it is easily detected by the tests; more frequently, however, it does not adhere at all. Occasionally it is found attached in some, and not in others, the cause of which difference is yet unknown.

8. The time occupied by the solution in reaching the thoracic duct has varied from one to five minutes. It is not discovered so soon in the lymphatic ganglions, from which circumstance our author supposes that there exists a direct communication between the arteries and lymphatic vessels.

9. The foreign substance introduced into the blood is quickly separated from it by the secretory organs, and especially by the kidneys. In many cases the diminution was already sensible in the course of a few minutes, and after five or six hours there remained no longer any trace, not even in the solids.

10. Finally, it results from our author's experiments that the hydrocyanated ferruret of potass may be mingled with the blood without danger to animals. This is not, however, the case with the solution of indigo, and especially with the solution of the sulphate of iron, which last injected into the veins, coagulates the blood, and produces death in a short time.—*Archives Générales, Sept. 1828, from the Zeitsch. für Physiol. Tom. III.*

7. *Reunion of the Ends of Different Nerves.*—M. FLOURENS, in a memoir in the *Annales des Sciences Naturelles*, for February, 1828, states that after having repeated the experiments of Fontana, of Montana, of Cruickshanks, and of others, on the reunion of the divided extremities of the same nerve, sought to determine the effects resulting from the union of the ends of different nerves. He therefore placed them in contact, and there kept them. In every instance the reunion took place. In some of the cases, the return of the function was complete, in others it failed. In all, the transmission of irritations by the united nerves was perfect.

8. *Identical Active Molecules in Organic and Inorganic Bodies.*—"While Mr. BROWN was examining the pollen of various plants under the microscope, he observed distinct motion in the grains when immersed in water, consisting not only of a change in place, but of form also. Having observed this in the pollen of all the living plants he examined, he next tried to ascertain how long this property continued after the death of a plant, and found that plants dried, or immersed in spirit for a few days, and some even which had been dried for twenty years, and others not less than a century, still exhibited these active particles. Whilst making the observation with the ovula or seeds of the *equisetum*, they were accidentally bruised, which very much increased the number of moving particles; and on bruising the floral leaves and other parts of mosses, they were also obtained.

"With a view of ascertaining whether these active particles, obtained from such different parts of plants, were the supposed constituents or elementary molecules of organic bodies, different animal and vegetable tissues were examined; whether living or dead, if bruised in water, they gave moving particles, identical with those of pollen. They were also found in products of organization, as gum resins, vegetable substances, and even pit-coal. The dust or soot deposited on bodies, especially in London, is entirely composed of them.

"As the particles were found in fossil and silicified wood, they were next sought for in inorganic substances, and were at once obtained merely by bruising a small splinter of window-glass upon the stage of the microscope. They were obtained in succession from rocks of all ages, each of the constituents of granite, travertine, stalactites, lava, obsidian, pumice, volcanic-ashes, meteorites, manganese, nickel, plumbago, bismuth, antimony, arsenic, and in every mineral that



could be reduced to powder sufficiently fine to be temporarily suspended in water. In many cases the particles seemed to aggregate into linear arrangements of fibrils, consisting of three or four, and these also had motion.

"Wood, linen, paper, cotton, wool, silk, hair, and muscular fibre, being burnt, gave the molecules as evidently in motion as before combustion.

"The form of these molecules appears to be spherical, but modifications of it occur in certain circumstances; the diameters of the particles are from one-fifteenth-thousand to the one-twenty-thousand of an inch.

"The principal substances from which these molecules have not been obtained, are oil, resin, wax, and sulphur; such of the metals as could not be reduced to the state of division necessary for their separation; and finally, bodies soluble in water.

"All these observations were made under a simple microscope, and, indeed, with one and the same lens, the focal length of which is about one-thirty-second part of an inch."—*Philosophical Magazine*.

9. *Effects produced by a division of the Semicircular Canals of the Ear.*—M. FLOURENS recently presented to the Academy of Sciences of Paris, several memoirs on this subject.

From the ease with which the semicircular canals in birds may be operated on, M. Flourens performed his first experiments on them. In pigeons, which were the subjects chosen, two of the canals are vertical, the upper one of which is the larger, and obliquely directed from behind forward; the inferior is directed from before backward, crossing the third, which is horizontal. A division of the horizontal canal of both sides is immediately followed by a violent horizontal movement of the head, which is so rapid that the bird loses its balance and rolls over, without power of recovering itself. A section of the vertical canal, whether superior or inferior of both sides, is followed by a violent vertical movement, whilst a section of all the canals produces a continued rotatory action of the head. This division of the canals does not destroy life, but the effects produced continue during the remainder of the life of the bird. M. Flourens afterwards repeated the experiments on young rabbits with the same results, except that the movements were less violent. These morbid motions of the head, both in birds and quadrupeds, cease when the animal is quiet, but appear again the moment it attempts to move. It is, says M. F. an extraordinary fact, that parts so minute and delicate should act with so much energy on the system, and it is equally curious that parts which would appear to be specially appropriated to the purposes of hearing should exercise so marked an effect on the above described movements, and above all, that each of the parts should determine a motion in conformity with its own position. Thus a section of the horizontal canal produces a horizontal motion, whilst a vertical section is followed by a vertical motion.—*Annales de Chimie, &c. Sept. 1828, and Archives Générales, Nov. 1828.*

10. *Researches on the Pollen of Plants and the ultimate Particles of Matter.*—

"The Academy of Sciences, at their meeting of Dec. 8, heard the report of MM. Cassina, Desfontaines, Mirbel, and De Blainville, on a memoir on Pollen and the Spermatic Granules of Animals, by M. Adolphe Brongniart. In a former memoir on the same subject, this gentleman had detailed some interesting and accurately analysed facts; on the theory contained in it the committee had not given any opinion, but had requested the writer to persevere in his observations. In a subsequent paper, M. Raspail, an experienced microscopic observer, had combated the opinions of M. Brongniart, and endeavoured to demonstrate that the granules contained in the grains of pollen, so far from being analogous to spermatic animalcules, are not even organized bodies. After advertg to these memoirs, M. Cassini noticed the opinions contained in a paper by the celebrated English botanist, Mr. Robert Brown. This gentleman thinks with M. Brongniart, that the granules of pollen are endued with a distinct and

independent motion; but on various theoretical points he differs from him. He has not only observed this motion in the granules of living plants, but has also perceived the same property of those of plants dried for a century, and preserved in spirits of wine, and in those of mosses and equisetums living or dried; in the molecules obtained by triturating in water the organic tissue of animals or vegetables living or dead; and in those obtained in the same manner from all sorts of inorganic substances, as glass, granite, &c. In short, he thinks that all the active molecules, organic or inorganic, are the same in nature, form, and size, and endued with the same properties; and not in the least different from those observed in pollen by M. Brongniart.

"In the present memoir, which is principally devoted to the refutation of M. Raspail's objections, M. Brongniart cites, in support of his own mode of observation, the curious fact that plants made to flower in winter, by means of shelter and artificial heat, have generally their grains of pollen filled with a mucilaginous substance, devoid of regular and moving granules; and as these plants rarely fructify, he thence draws an inference favourable to his system.

"Thus, then, the question discussed by M. Brongniart is now debated by three very skilful observers, and resolved in three different ways; for, whilst M. Brongniart admits, in the interior of grains of pollen, regularly organized corpuscles, of a very peculiar nature, distinct from all other bodies, analogous to spermatic animalcules, and essentially destined to produce the embryo; M. Raspail sees nothing in these corpuscles but little resinous masses, shapeless, variable, and absolutely deprived of organization and of life; and Mr. Brown, discarding at once the exclusive opinions of both, admits in all natural bodies, whether organic or inorganic, active molecules of the same form, size, and nature, and exhibiting a spontaneous motion as soon as they are disintegrated and plunged in fluid.

"The committee, on the one hand, agreed with M. Brongniart and Mr. Brown, that the causes to which M. Raspail attributes the motion of the granules, exercise, in reality, no influence over them; and on the other, they coincided with Mr. Brown, that various inorganic bodies triturated in water, offer, if not always, at least sometimes, corpuscles whose size, form, and motion are nearly the same, under the microscope, with those of the granules of pollen. They also remarked, that the resemblance between the active molecules of Mr. Brown and the spermatic granules of M. Brongniart, furnishes strong presumptions against the hypothesis of the latter. They called the attention of botanists to the singular phenomenon of apparently spontaneous motion, and asked if it might not be attributed to mutual attraction and repulsion. Great difference was observed in the manifestations of this phenomenon; so much so, that under circumstances to all appearance alike, the granules of the same plant at one time exhibited a very perceptible motion, and at another perfect immobility.

"‘Such,’ said M. Cassini, ‘are the external appearances. But must we, from these, necessarily conclude that the internal nature, and all the properties and functions, are absolutely the same, in bodies of so different origin? On this we have not had the temerity to decide; it can only be done after researches much more numerous and profound than we have been able to make.’”—*The Magazine of Natural History*, January, 1829, from *Le Globe*, December 13th, 1828.

11. *Successive Abolition of the Senses in four children of the same family.*—"Dr. STENDEL relates a curious circumstance which occurred in four children, born of strong and healthy parents, and who were affected successively with a malady which manifested itself by the following symptoms: they all continued to thrive, both physically and mentally, until they attained their sixth year; but in their seventh year they all, one after the other, began to feel a particular weakness of the sight, which went on progressively increasing. The intellectual powers at the same time diminished; all those things which interested them before, became now indifferent to them; they by degrees lost the use of speech.

In the ninth year vision became almost abolished, together with the use of the organs of sense. Cold and heat were hardly felt by them; they showed no inclination for food; the sense of hearing was the last to leave them. From the ninth to the fourteenth year, epileptic affections came on, which continued to increase until the fifteenth year. At this period a species of mania declared itself. The eldest of these unfortunate children was a boy, who died in this state in his twenty-first year; the second was a girl, who died in her twentieth year; of the other two, who are still living, the one is a boy, aged seventeen years, and the other a girl, aged nine. The same symptoms are present in them, and is supposed that they will meet with the same end as the two first. The youngest child was sent, at four years of age, by its parents, to a great distance from home, with a hope of averting the melancholy catastrophe with which the others met; it continued to enjoy a good state of health until the sixth year, when the malady declared itself, which obliged the parents to send for the child home. All the therapeutic means employed in these cases proved quite unavailing, and had no influence whatever on the march of the disease. It is to be regretted that the bodies of the two who died were not submitted to an inspection."—*Lond. Med. and Surg. Journ. Dec. 1828.*

12. *Experiments on Cutaneous Absorption.* By Dr. WESTRUMB.—*Exp. I.* Dr. Westrumb, having prepared a bath of the temperature of from 20° to 22° of Reaumur, containing a grain of hydrocyanate of potash, two grains of nitre, and some grains of musk, he placed his arms in it as high as the elbows, and kept them there for three quarters of an hour. The bath having then been removed, the doors and windows were opened to change the air of the room; nevertheless the odour of musk was manifest in the pulmonary exhalation of the experimenter. He voided his urine immediately after the use of the bath, and at one hour, five hours, and thirteen hours, subsequently. The urine passed after the first hour exhaled a feeble odour of musk. Two specimens were taken of each portion of urine, one to be treated with tests of hydrocyanate of potash, the other for those of nitrate of potash. The presence of the prussiate was distinctly visible in the first specimen, in the second there was no evidence of the existence of nitre.

*Exp. II.* Was a repetition of the preceding experiment, the author enclosing his mouth and nose in a tube, one end of which passed out of the room, the whole so contrived that he breathed only the external air. After the experiment the pulmonary exhalation was impregnated with the odour of musk, but not so strongly as in the first experiment. This odour was not perceptible in the urine passed a short time after the experiment; but the hydrocyanate of iron was very perceptible in it; nitre could not be discovered in it.

*Exp. III.* Was a repetition of the preceding experiment, and with the same results, but the experiment was not as carefully made.

*Exp. IV.* This was a repetition of the two preceding experiments. Every care was taken, and the experimenter continued to respire by the tube for a long time after the experiment. The results were the same as before, only the odour of musk in the breath was less, and disappeared sooner.

*Exp. V.* The tube being applied to the mouth and nose, the experimenter placed his arms as far as the elbows in a bath of a strong decoction of rhubarb; and had one of his legs rubbed with opodeldoc. He continued his arms in the bath an hour and a quarter. After the first quarter of an hour, the breath had a decided odour of camphor, which increased during the experiment, and was perceptible for six hours afterwards, but feebly. The urine passed a little while after the experiment, and that which was voided at the end of three hours, was of a reddish brown colour, when a solution of potash was added. This colour is attributable to the presence of rhubarb, for the same solution of potash mixed with urine passed *before* the experiment did not cause a similar change of colour. It cannot be said whether the camphor also passed into the urine,



though the odour of that collected immediately after the experiment was essentially different from that passed before the experiment.

*Exp. VI.* Two vesicatories, each the size of a crown, having been applied to the legs of a healthy labourer, who had previously taken a bath to cleanse himself, the lymph was evacuated and cupping-glasses placed over the sores made by the blisters. The man then took a pediluvium of  $20^{\circ}$  Reaumur, containing hydrocyanate of potash, and the temperature of which was kept the same during an hour and a half. At the end of this period the vesicatories had discharged much, but two hours afterwards sufficient lymph had collected to enable a chemical analysis of it to be made. The small quantity of lymph collected having been diffused in distilled water, was treated with a solution of hydrochlorate of peroxide of iron; the liquid assumed a light bluish-green colour, a certain sign that it contained hydrocyanate of potash; and proving that this had been absorbed. The analysis of the portions of urine voided one hour, three hours, and five hours after the bath, confirmed also this fact. They changed, on the addition of a solution of salt of iron a beautiful blue colour, which was most intense in the portion passed three hours after the bath. The subject of the experiment would not consent to be bled, so that the blood could not be analysed.

*Exp. VII.* A healthy and robust man continued an hour and forty-five minutes in a foot bath of  $22^{\circ}$  Reaumur, containing a strong solution of prussiate of potash. The man voided his urine a little before the experiment, and also at two, seven and eleven hours after the bath; the urine passed the second hour on being treated with the hydrochlorate of iron, assumed a fine blue colour, which showed itself more slightly in that passed at the seventh hour, and was scarcely perceptible in that passed at the eleventh hour. Some ounces of blood were obtained from this subject, by means of scarifications and cups to the thighs. The clots of blood being treated at first with a little nitric acid, were diffused in distilled water, and then submitted to the action of hydrochlorate of iron; it seemed to contain some slight but indistinct vestiges of hydrochlorate of potash.

*Exp. VIII.* Four ounces of blood were taken from the arm of a person who had remained two hours in a foot bath, of from  $20^{\circ}$  to  $22^{\circ}$  Reaumur, in which had been put half an ounce of hydrocyanate of potash and two ounces of nitre. This blood contained evidently hydrocyanate of potash: as to the nitre, its presence was not distinctly evident. The urine contained the hydrocyanate of potash.

*Exp. IX.* A person introduced his arms as far as just above his elbows, into a bath containing a decoction of rhubarb; on withdrawing his arms from the bath at the end of an hour and a half, they were scarified, and cupping-glasses applied to them, by which means some blood was obtained. This blood being diffused in water, and treated with a solution of potash, assumed a deep brown colour. The same change of colour, indicating the presence of rhubarb, took place in the urine passed a little while after the use of the bath.

*Exp. X.* After having opened, emptied and covered with cupping-glasses the vesications produced by blisters in a healthy man, his feet were placed for an hour in a bath composed of a saturated decoction of rhubarb. About a grain of lymph was collected in each cupping-glass; this lymph, as well as the urine, contained rhubarb.

*Exp. XI.* The hind legs, and the greater part of the body of a dog, was shorn close, great care being taken not to injure the epidermis. The animal was afterwards held for half an hour in a bath of  $20^{\circ}$  Reaumur, to which had been added a saturated solution of hydrocyanate of potash. The dog having been strangled after the experiment, the blood of the vena cava, the urine of the bladder, the chyle of the thoracic duct were collected, and the lymphatic ganglions of the groin. The prussiate of potash showed itself very distinctly in the blood, but not in the chyle of the thoracic canal or in the inguinal glands. On dropping a solution of hydrochlorate of peroxide of iron on the adipose panicle, here and there a bluish-green colour was produced.

*Exp. XII.* Another dog was deprived of its hair in the same manner, and frictions made on the shorn parts, with a weak tincture of cantharides, until the skin assumed a red appearance; the animal was then immediately placed in a bath similar to that used in the preceding experiment, in which it was also kept half an hour. The presence of hydrochlorate of potash in the blood of the vena cava and in the small quantity of urine found in the bladder, was distinctly observed; it showed itself also in the chyle of the thoracic duct and in the lymphatic glands of the groins, and the whole of the internal surface of the skin of the hind limbs and of the abdomen assumed a fine blue colour.

Dr. Westrumb draws from these experiments as well as other facts, physiological, pathological and therapeutic, the following conclusions:—

1st. The skin is endowed with an indeterminate faculty of absorption; it can admit and introduce into the circulation all sorts of substances, from the least to the highest degree of fluidity, provided they are soluble.

2d. Some irritating substances which break or destroy the epidermis, are absorbed more quickly and in greater quantity than mild and non-irritating substances; first, because by destroying the epidermis, they remove a first obstacle which opposes itself to their easy absorption; secondarily, because that the irritation which they produce augments the activity of the absorbent veins; thirdly, finally, by overcoming the repulsive force of the lymphatic vessels, they incite these to take part in the absorption.

3d. Mild articles which do not affect nor destroy the epidermis, are absorbed more quickly when the epidermis is injured or removed than when it is perfect; because, when the cuticle is removed, the contact of the foreign substances with the absorbents is immediate.

4th. The vessels of the skin which possess the power of absorbing are some veins and absorbents. The first absorb always; the second do not take part in the absorption of heterogeneous substances here as in other parts of the body, but when their repulsive force has been overcome, or when some cause makes them deviate from their normal action.—*Journal des Progrès, Vol. XI.*

13. *Poisoning of Plants by their own products.*—M. MACAIRE read before the Physical Society of Geneva some interesting experiments on the effects produced on vegetables by their own juices or products. The general results he obtained were, that the juices of plants which were capable of exercising a poisonous effect on other vegetables, were equally deleterious to the plant which furnished them, thus presenting another analogy between vegetable and animal life. These results can only be accounted for, says M. Macaire, on the following suppositions.—1st. That the alteration which the vegetable extracts undergo by exposure to the action of the air renders them deleterious; or, 2d, by the separation of the poisonous and serous juices in different vessels in deleterious plants. If this latter idea is admitted, the poisonous portion must be considered as a peculiar secretion, and not a fluid necessary to the life of the plant.—*Annales de Chimie et de Physique, Sept. 1828.*

14. *On the Effects of the Gastric Juice on the Stomach after Death, and on Abstinence.*—DR. POMMER has instituted a number of experiments on dogs, cats, and rabbits, to ascertain the correctness of the opinion of John Hunter, relative to the dissolving action of the gastric juice upon the stomach after death; and he has arrived at the following conclusions:—In animals the gastric and intestinal secretions neither soften nor dissolve the membranes of the stomach or intestines; the secretion of these fluids is rather diminished than augmented during hunger; neither does the latter produce inflammation of the stomach; and death from inanition is the result of the general prostration of the vital forces, and not of inflammation of the stomach. Carnivorous animals support hunger better than herbivorous, and cats better than dogs; carnivorous animals who during abstinence, drink water live longer than those deprived of drink. Rabbits die often of inanition, although they have still some aliment remaining in

their stomach; these animals never drink; when driven by hunger, they take meat, they die in a short time afterwards, although they can digest this substance, as is easily shown. In animals destroyed by inanition, the veins of the lower stomach are ordinarily gorged with blood.—*Archives Générales*, Dec. 1828, from the *Médec. Chirurg. Zeitung*, 1828. No. 4.

15. *Menstruation at the age of nineteen months.*—A case of this kind is related in the third number of *Meckel's Archiv. für Anat. und Physiologie* for 1827. At birth this child was of an ordinary size; but after the first month she commenced to grow rapidly, and at nine months it was of the usual size of a child of a year and a half old. About this time she passed from the vagina some drops of blood; at eleven months of age she had another and more abundant sanguineous discharge, and at the same time the mammary gland began to be developed, and hairs appeared on the mons veneris. At fourteen months she had a third, and at eighteen months a fourth sanguineous evacuation from the vagina. The whole physical development of the child is precocious; but her mental faculties are not greater than those of other children of her age; she appears to have no desire for sexual intercourse.

16. *Connexion between Monstrosity and Deficient Development of parts of the Nervous System.*—Professor TIEDEMANN has published, in the *Zeitschrift für Physiologie*, an interesting series of observations on the connexion between the deficient development of the nervous system and of the extremities in monsters. He thinks "that there is a direct relation between the constitution of the nervous system and the construction of the other parts of the body. With the absence of any nerve there is connected the absence of the organ to which the nerve belongs, and with the imperfect formation of any part of the nervous system there is associated the imperfect development of the organ which it supplies. He is farther convinced, that in all monsters with excess of formation, whether it consists in single parts, or is extended to the whole body; or whether the doubling of parts is of the upper or under portion or to one side, the distributions of the nervous system correspond. The same takes place where two organs are blended into one. Professor Tiedemann, having assumed these as established facts, next proceeds to inquire whether the defective formation of the organs is the consequence of the want of the nerves; or whether the nerves are not formed because the organs are wanting; and conversely, whether the formation of a part in excess is owing to excessive development of the nervous system; or whether the nervous system is in excess because there are supernumerary organs? As the result of a very ingenious and profound inquiry, he concludes that the nervous system, as the first existing apparatus, regulates the formation and development of the embryo, and determines the peculiar form and disposition of the rest of the organs."—*Ed. Med. and Surg. Journ.* Jan. 1829.

17. *On the Powers which move the Blood in the Capillary System.* By Dr. F. F. REUSS.—In Vol. I. p. 423, and Vol. III. p. 194, we laid before our readers a notice of the very interesting experiments of Dr. Dutrochet on the immediate agent of vital movements, from which experiments it would appear that this agent is galvanism or electricity. As connected with this subject, the following experiments and speculations of Dr. F. F. Reuss, published in 1821, in the *Commentationes Soc. Physico-Medicæ Mosquensis*, II. ii. 327, and for a knowledge of which we are indebted to the Edinburgh Medical and Surgical Journal for July last, will be read with interest. Dr. R. relates, in a preliminary essay, several experiments to prove a new property in galvanism, that of impelling water from the positive to the negative pole.

"This impulse," says he, "towards the negative pole is better seen, when the water is contained between two parallel glass plates three or four lines apart from one another, and when the wires are immersed at right angles to the water, being made of gold or platinum, and covered with glass tubes sealed at



their extremities to the wires. It is convenient also to keep the wires steady yet moveable by thrusting them through two pieces of cork which rest on the edge of the vessel. If into the apparatus so prepared common water be poured, and the battery charged, the calcareous matter, which is separated by the decomposition of the salts of lime in the water, and causes turbidity, will not only show by its own movements a continual flow of the water from the positive pole in lines curved downwards, and then bending upwards to the negative pole, but will likewise delineate the course of the current by particles adhering to the surface of the glass plates." \* \* \* \*

"But the repulsive power of the positive and attracting power of the negative pole is seen much more satisfactorily, if the water in contact with each pole is separated by a stratum of porous matter, so that the particles which are impelled from one towards the other pole may pass through the interstices, while the cohesion of the interposed body may prevent other particles from passing in the opposite direction by their own gravity. Which conditions, in fact, are easily fulfilled by taking a tube of the form of the letter U, filling its curve with sand, and its straight, upright limbs with water. The two wires being now immersed in the water in the two limbs, and the galvanic circle consequently completed, the water will be observed slowly to sink in the positive and rise in the negative end of the tube. With a voltaic pile composed of ninety-two silver roubles, and as many plates of copper, a tube  $7\frac{1}{2}$  inches long, and wires made of platinum, I found that in fifteen or twenty minutes, the water stood ten lines higher than before in the negative, and as much lower than before in the positive end of the tube. On interrupting the galvanic circle, the water soon returned to its original level, and on restoring the continuity of the circle, the transfer recommenced. Next day, fourteen hours after the experiment began, the positive limb was empty, the negative limb was full to overflowing. After observing that it continued thus for four days, I interrupted the galvanic circle again, and the water soon returned to its equilibrium of level."

"A similar but much more wonderful result was obtained when the interposed substance consisted of clay. I prepared a quadrangular prism of moist potter's clay, ten inches long and two inches in breadth and thickness. At each end of this prism, and five inches apart from one another, I fixed, half an inch deep in the clay, two glass tubes three inches long, an inch in diameter, and open at both ends. I then poured into each tube an inch of water and covered each of them, (loosely, however, so as to allow a passage to the air,) with a cork, through which the two wires of the battery were passed down to the middle of the water. The pile consisted this time of seventy-four double plates, such as those used in the last experiment. The following phenomena took place. As soon as the electric circle through the wet clay was completed, which was indicated by the escape of air-bubbles from the water, the clay bottom of the positive tube began to swell and raise the sand, with a thin stratum of which I had covered it to keep the water from becoming muddy. In the course of half an hour the clay appeared softened to mud, a part of which pierced through the sand, and projected upwards like a little hill. By and by the pyramid discharged from its apex a muddy liquid, which ran down the sides like lava, and soon formed over the sand a layer of mud three lines in thickness. This beautiful appearance brought forcibly to my recollection the accounts given of the phenomena of mud volcanos. The explanation obviously was, that, when by the impulse of the positive pole the water was thrust towards the negative pole upon the clay at the bottom of the tube, the clay was softened, and the water in subsequently piercing the clay, threw the mud upwards and around it, just as a gimblet does while piercing wood. For half an hour no change was observed in the level of the water in either tube, and the sand and clay remained in the negative tube quite undisturbed. But when three hours had elapsed, the level of the water in the negative tube had risen one line, in twelve hours it had risen two lines and a half; and in the meantime, the whole water of the positive tube had entered the clay, and the surface of the

mud was about two lines lower than the *original situation* of the water. The following night the mud in the positive tube had sunk so far that the wire was not immersed in it; consequently the electric circle was interrupted. Nevertheless I found the level of the water in the negative tube a quarter of a line higher than before, and the clay in the positive tube was firm on its surface. The positive wire being then depressed so as to restore the continuity of the galvanic circle, the clay of that side gradually became firmer and more dry, while the water rose in the negative tube. At length in two days the latter had attained its highest level, namely,  $3\frac{1}{2}$  lines above its original surface, while the clay in the positive tube had become so dry as to crack. In two days more the cracks were larger, but the level of the water in the negative tube was not higher, probably because any further increase it might have received was compensated for by evaporation. That no more than one-third of the water which disappeared from the positive appeared in the negative tube,—is to be explained partly by its having evaporated, partly by its having been diffused and retained in passing through the clay between the tubes.”

In addition then to the hitherto known properties of the electric current, it is endowed with the power of impelling fluids in a direction from positively to negatively electrified bodies. This power Dr. R. denominates the *vis electricitatis hydrogoga*; he resorts to it to explain some terrestrial phenomena, and also the movement of the blood through the capillary system of animals, and he shows satisfactorily that the action of the heart is completely inadequate to the latter purpose. Dr. R. is of opinion that the arterial system is in a state of positive, and the venous system in a state of negative electricity; the correctness of this theory, however, remains still to be proved by experiment and observation.

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#### PATHOLOGY.

18. *General Induration of the Arterial System*.—A man, aged fifty-six years, entered the Hospital of Toulon for the treatment of an old ulcer of the left leg, which leg was covered with varicose veins. The foot had been amputated at Smyrna, in consequence of a viper-bite, some time previously. He also complained of pain in the *left* foot, the little toe of which was observed to be swelled, cold, and of a bluish colour. This man, who was naturally robust and vigorous, had been worn down by long privations and profound chagrin. His answers and his countenance indicated a deep melancholy; he had little appetite; sleep short and interrupted; pulse large, slow, and irregular; the heart beat over a very large surface. The gangrene extended rapidly, and was considered as the consequence of the disease of the heart, which was quite unequivocal. As mortification destroyed the different parts they were removed. The pain was insupportable; the pulse became slower and slower, and the arteries offered such a degree of resistance to pressure as led to the conviction that they were ossified.

On dissection, the heart attracted great attention. It was extremely enlarged; and there were several white patches on its surface. The left ventricle offered as much resistance to the scalpel as thick and dried parchment. The origin of the aorta, as well as the aortic valves, were completely cartilaginous; and this was the case with the whole of the aorta, the iliac and crural arteries, and their branches. There were several portions of these various arteries *ossified*, besides the whole being cartilaginous. “The arteries of the upper extremities were in a similarly indurated condition.”—*Ephemerides de Montpellier*, 1828.

19. *Case of almost complete Obliteration of the Aorta*.—A very interesting case of this description is related in the fourth number of the *Journal Hebdomadaire de Medecine*. A shoemaker, aged ninety-two, was admitted into La Charité, June 19th, 1817. He was of small stature, with a small bald head, and a retiring

forehead. His legs were very much bowed; his intellects, greatly weakened, scarcely permitting him to give any satisfactory account of his previous history. He, however, said that he had suffered from a paralysis of the right arm, and that his mouth had been drawn on one side. At the period of his admission he could use both arms equally well, though his right hand was slightly bent. The temporal arteries beat forcibly; the pulse was hard, frequent, and regular; the skin hot, the tongue hard and dry; but notwithstanding this he demanded food continually. He was at first constipated, and afterwards purged. With respect to the chest nothing particular was observed, excepting that percussion below the right clavicle produced a more obscure sound than on the other side at the same spot. As he continued constantly in the horizontal posture on his back, a gangrenous eschar formed on the sacrum. After a long residence in the hospital, he died without any remarkable symptom. The examination of his body took place twenty-four hours after death. There was slight effusion beneath the arachnoid membrane; and the tissue of the pia mater was infiltrated; these two membranes were readily raised up. The two hemispheres of the brain, particularly that of the left side, presented many traces of previous apoplectic effusions of small extent: the most considerable was found in the substance of the left corpus striatum. The heart was of the ordinary size; the lining membrane of the left ventricle was a little thickened; the sigmoid valves exhibited some points encrusted with osteo-calcareous particles. The aorta, at its origin, was nearly of its ordinary size: it soon gave off the innominate, the calibre of which was much greater than natural. After having given off this branch, the aorta, much diminished, proceeded upwards and to the left, in the direction of the carotid of that side, and then turning at an almost acute angle it descended, presenting a slight enlargement at the point where the arterial ligament united with it. Near this spot the left subclavian was given off, which, very much dilated at its origin, passed almost directly upwards, diminishing sensibly in size, without having furnished any other branch. The aorta immediately afterwards presented a very considerable circular contraction, such as would be produced by a ligature drawn very tight; then resuming its size, it presented a slight enlargement, which was more evident on the left than on the right side. The aorta then continued to descend in the abdominal cavity, where its calibre appeared to be smaller than natural. This difference was more perceptible towards its lower portion, and the external iliacs did not seem to be in proportion to the size of the lower extremities. From the termination of the right subclavian, which was remarkable from the increase of its volume, several arteries of a large size arose; the transverse cervical and the deep cervical, each of them equal to the humeral artery, followed their usual course, and were remarkable for the thickness of their coats, and the great number of their bendings. The first of these arteries, after having arrived, (without diminution,) towards the angle of the fourth and fifth rib, penetrated between their interval, furnished the corresponding anterior and posterior intercostals, passed a short space upon the pleura, and then continuing its course with one of the intercostal arteries, emptied itself into the aorta half an inch below its contracted portion. The deep cervical presented this peculiarity—that running a shorter course, and descending more directly along the posterior and superior part of the back, it divided into three large branches, which, penetrating separately into the chest, between the intervals of the four first ribs, and equally furnishing the corresponding intercostals, arrived at the aorta, into which they emptied themselves by as many large openings. The same disposition was observed on the left side; but, besides, on that side the superior intercostal was remarkable, which, arising from the subclavian, became confounded with the trunk of the second aortic intercostal.

The right and left internal mammary arteries were remarkable from their considerable size: they were larger than the humeral arteries; both of them, after running their usual course, lessening somewhat towards the inferior part of the thorax, again increased sensibly in calibre, and became very tortuous; then con-



tinuing their course with the epigastric, and forming with it one trunk exceeding in size that of the external iliac, terminated in the crural artery, which became somewhat enlarged. Before giving rise to the profunda, the crural artery gave off a pretty large branch, which was traced to the external obturator muscle. The right epigastric artery was a little larger than the left. The coats of the aorta were not changed in structure, excepting in a few points, where they were a little thickened. Near to the contracted portion the membranes appeared to be also in a state of integrity: seen from within, the contracted portion was exceedingly regular, and its diameter was that of a crow-quill.

*Explanation of the Plate.*—Pl. II. *aa.* The heart. *b.* Pulmonary artery. *c.* Arterial canal obliterated. *d.* Aorta at its origin. *e.* Aorta considerably diminished in volume after giving rise to the arteria innominata. *f.* Contraction of the aorta. *gg.* Descending aorta. *hh.* Primitive iliacs. *ii.* External iliacs, their calibre less than natural. *kk.* Crural arteries larger than the iliacs. *l.* and *m.* Arteria innominata and right subclavian. *nn.* Internal mammaries, considerably augmented in size and continuous with the epigastric arteries. *oo.* Epigastric arteries equally enlarged and tortuous. *pp.* Deep cervicals dilated and communicating by free anastomoses with some of the intercostals. *qq.* Intercostal arteries. *rr.* Transverse cervical arteries anastomosing with other intercostals. *ss.* Intercostals communicating with the transverse cervicals. *ti.* Intercostals in their natural state. *u.* Left subclavian increased in size. *vv.* First intercostals anastomosing with the third.

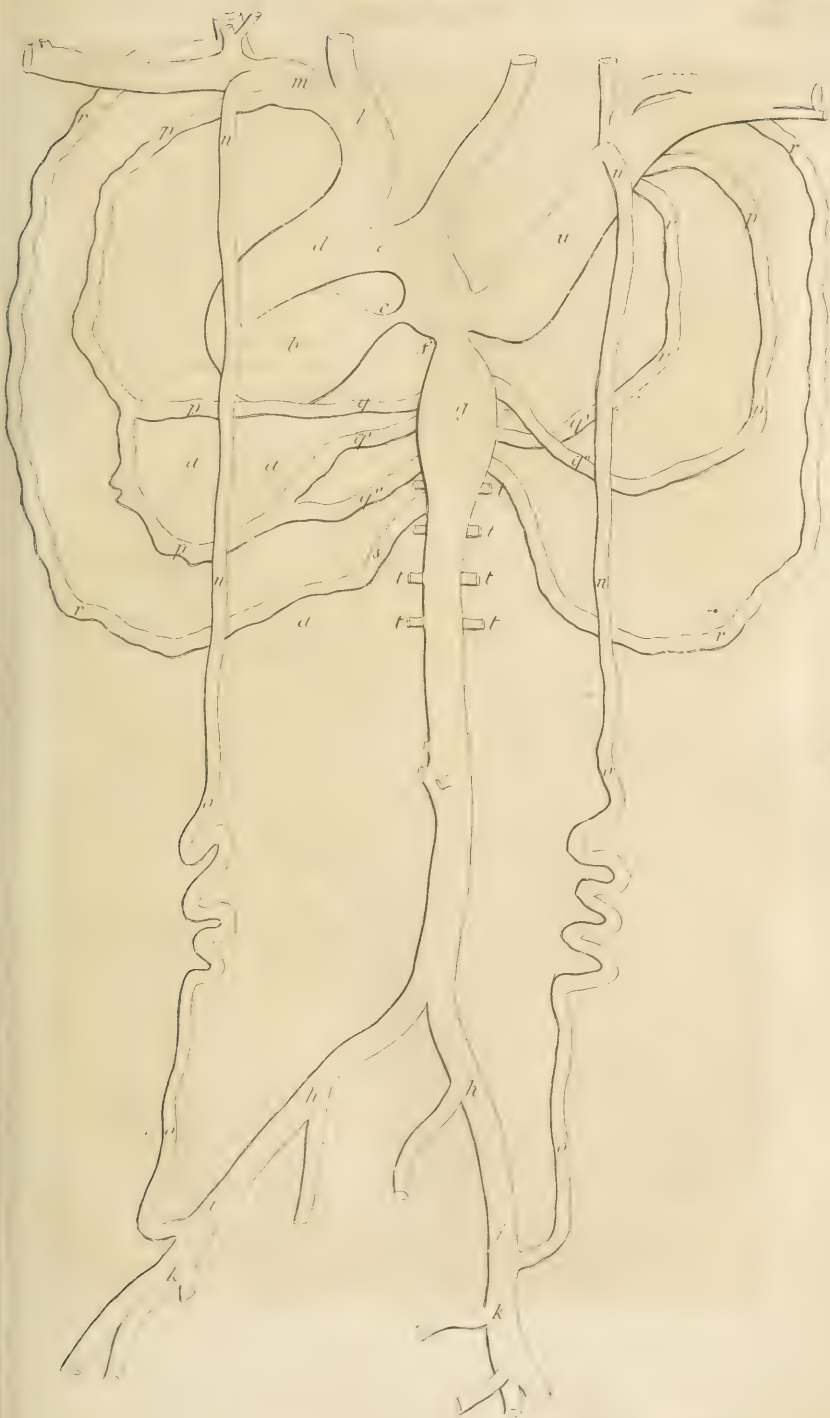
20. *Account of Dr. Gall's Disease.* By Dr. ROBOUAM—This celebrated man was of middling size: his chest large, and his limbs muscular. His head was voluminous, his forehead high and broad. Possessed of a vigorous constitution, he was enabled to give himself up to assiduous and fatiguing labours, which occasioned but slight derangement of his health at long intervals; for instance, two or three attacks of gout, and some gastro-intestinal affections, &c.

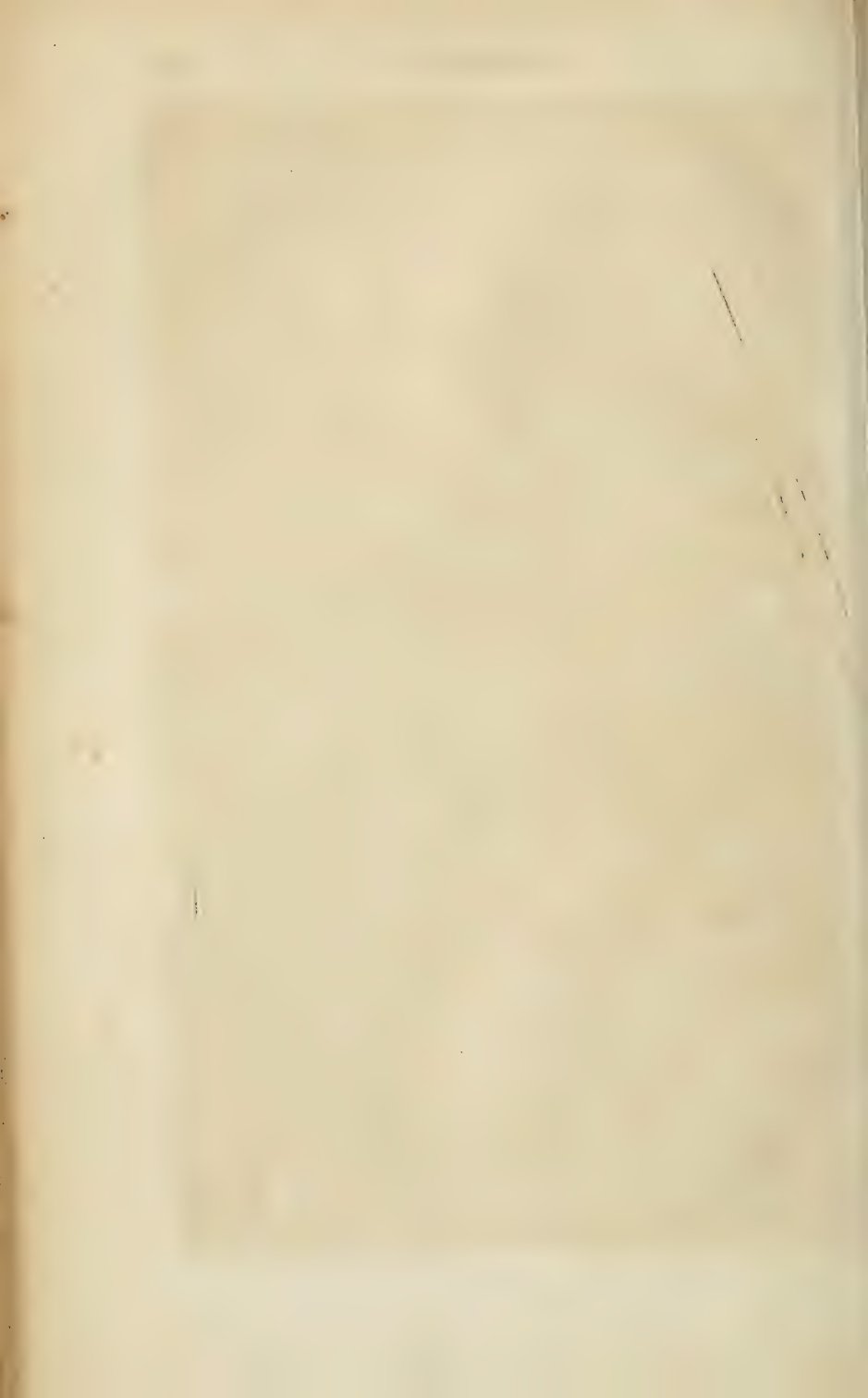
Of late years, his walk was heavy; and, when he ascended the stairs, he experienced difficulty of breathing and palpitation. About eighteen months since, these symptoms became more intense, and obliged him to keep himself in a state of repose, to follow strict regimen, and frequently to lose blood. An attentive examination by M. Dennessi, Rostan, Andral, and myself, enabled us to detect hypertrophy of the heart, with dilatation especially of the left ventricle. After some months, M. Gall was enabled to resume his habitual occupations. In November he commenced his lectures at the Athenæum, which he continued without interruption to the third of April last, when, on returning home, he experienced symptoms of cerebral congestion. On the 20th, the left side of the face was contracted, with debility of the extremities of the right side.

The symptoms continued unabated during the month of May. The administration of purgatives occasioned prolapsus of the rectum and hemorrhoidal tumours, with slight exudation of blood. The spine and weakened limbs were rubbed with the balsam 'Nervins.' The third friction produced an attack of gout in the hand and foot, which yielded, at the end of several days, without amelioration of the other symptoms. The employment of a dozen 'douches' produced no benefit.

M. Gall then, by the advice of M. Fouquier, and several other physicians, saw Dr. Sarlandière, who electrified him eighteen times, and three or four times acupunctured the epigastric region, because the functions of the stomach had latterly become impaired; all was ineffectual; and, it being thought advisable to try country air, he was removed to his house at Montrouge.

In addition to the other symptoms, nausea and want of appetite supervened. On the 13th of July he took an emetic, which produced several vomitings, and two stools, with some relief. On the following day, a few spoonfuls of wine were administered with the view of reviving the action of the stomach. The left foot was now attacked with gout. The tongue was red and dry, and the stomach rejected food.







About this period, Drs. Broussais, Koreff, Dennesi, and Robotiam met in consultation, and were of opinion that the brain was affected, coupled with hypertrophy of the heart and gastro enteritis. The latter affection excited particular attention. Mucilaginous drinks, ice triturated with sugar, nutritious and sedative clysters, frictions with a sedative liniment on the epigastric region, and even little moxas were had recourse to. M. Broussais entertained the most unfavourable prognostic, founded on the wasting of the patient, and the bad state of the digestive organs.

It ought not to be omitted that, during the whole course of the disease, no marks of febrile action were perceived; but M. Dennesi had observed, that the symptoms exacerbated in the afternoon.

On the 6th of August the uneasiness of the patient was more evident. About two o'clock he was chilly, the skin became pale, the pulse varied, but no reaction. The stomach remained in the same state, the mucilaginous drinks passing with difficulty.

Moxas were ordered to be applied at seven o'clock in the evening; but at two, he had a violent shivering which lasted an hour, and was followed by an instant of reaction; the pulse increased to 85; many shirts were wetted by perspiration. He now insisted on taking the sulphate of quinine;—six grains were administered in a clyster, and fourteen given by the mouth, in the course of the twenty-four hours.

The intellect was good, the face natural, the tongue dry and red, the lungs performed their functions, no intermittence was perceived in the pulse. The belly free from tension, swelling, or pain. Chicken broth and gum water passed no longer with difficulty, which had occasionally occurred.

The 8th, 9th, 10th, 11th, and 12th, the pulse was never below 84, nor above 92. The exacerbations after dinner were not remarkable. Twenty-four grains of sulphate of quinine were administered in twenty-four hours. About a pint of chicken broth or gum water was taken daily, and digested without difficulty; latterly, we remarked that the colour in the face increased; the eyes began to have a wandering appearance, the ideas became incoherent; in a word, the breaking up of the faculties had commenced.

The early part of the night from 12 to 13 was tranquil: the latter greatly agitated. There was an excitement in the brain which was combated by sinapisms to the legs, and a clyster of musk, camphor, and sulphate of quinine.

On the 13th, drowsiness; he was visited by his intimate friends; he neither testified pleasure, nor spoke to them. The functions of the brain were evidently more impaired. The face red. Eyes still more wandering, and open. The limbs were supple, and free from spasmodic twitches.

Twelve grains of sulphate of quinine were given in the course of the day. Bilious matter has been vomited for some days past.

14.—All exciting medicines were withdrawn; the use of "adoucessants" was resumed, with warm cataplasms and sinapisms to the extremities, and clysters of farinaceous materials. The symptoms nevertheless continued to increase from the 16th. The patient was in a profound calm, and with few signs of sensibility.

21.—About eleven o'clock in the evening, the circulation became quick and irregular; the respiration laborious. In which state of agony he continued until the following evening, when the scene was closed in death.

*Dissection.*—*Head* large and heavy; the cranium twice the ordinary thickness; strong marks of the meningeal artery on its inner surface; infiltration of serum in the pia mater; arachnoid raised throughout the whole extent of the hemispheres. Four or five ounces of serosity at the base of the cranium. The brain was not cut, being intended to be preserved in spirits of wine entire. It weighed two pounds ten ounces and a quarter. The right lobe of the cerebellum was larger than the left. At the upper part and right side of the falx cerebelli, a small fibro-cellular tumour exists in the substance of the brain, about the size of a nut, pedicled and osseous in the centre. The vessels of the

brain are generally gorged with blood. The softness of the brain, supposed to exist during life, by the attending physicians, could not be ascertained, as it was not cut into. This state was supposed to occasion the debility of the right extremities, which is the more probable, as the serous effusion evidently took place at the close of life.

*Chest.*—The lungs were sound, and without adhesion to the pleura. Heart one-third smaller than usual; soft, and containing a moderate quantity of blood, half liquid and half coagulated. Its cavities were larger than usual, and its walls thick, especially those of the left ventricle. In the arterial valves, osseous points are felt. The transverse arch of the aorta is evidently dilated. The internal membrane of the arteries is red, and this redness is remarked even as far as the femoral and branchial.

*Abdomen.*—The stomach was large, and its parietes thickened; its mucous membrane red, thick, and softened. It was also eroded in many points; its vessels distended with blood. The mucous membrane of the duodenum, jejunum, a portion of the ilium, right colon, and its transverse arch, were red, thickened, and softened. The glandulæ Peyeræ turgid. No ulceration was found. The gall-bladder is divided in two by a hard and thick fibro-cellular intersection, and which interrupts all communication between the two cavities. One is large, and of a brilliant whiteness; the other possesses the ordinary appearance of the gall-bladder. The first contained puriform matter, and many calculi; the other bile, with calculi. The liver was healthy.—*Annales de la Médecine Physiolgique, Sept. 1828.*

21. *Hypertrophy of the Brain.*—"Hypertrophy of the brain has been latterly considered a primary disease of this organ; yet it has been, up to the present period, but vaguely described: and, indeed, the structural anomalies and pathognomonic signs of this disorder are not to be understood nor explained without an attentive study of some well defined cases. M. DANCE has for this purpose adduced several very interesting ones; but he is properly careful to inform us, that he does not apply the term hypertrophy to an augmentation of the brain resulting either from inflammation of its substance, from serous or sanguine congestion there, or from effusion into its cavities. For the afflux and stagnation of the fluids may increase the apparent dimensions of this viscus, but are not incorporated or identified with its substance, whilst real hypertrophy, he maintains, essentially consists in an unnatural augmentation, either as to bulk or number, of the constituent molecules peculiar to each organ. Now the brain is liable to this excess of nutrition, and ultimately to acquire a volume disproportionate to the capacity of its osseous receptacle.

"M. Dance details four cases, which are quite sufficient to prove the existence of this disease; but they are not numerous enough to furnish a complete history of this remarkable change of structure, though they tend considerably to improve our acquaintance with several of its distinguishing peculiarities. The following conclusions may be deduced from his cases.

"1. Preternaturally increased nutrition of the brain is characterised by the flatness and approximation of its convolutions, the coaction of its ventricles, and the unusual whiteness and firmness of these parts, and by a singular dryness of its parenchyma and of the arachnoid cavity, whilst the general texture of this viscus evinces no sensible alteration.

"2. Hypertrophy has been repeatedly observed to predominate throughout the whole of the cerebrum; but never in the cerebellum.

"3. Hypertrophy is so far from increasing the action and energy of the brain, that it decidedly tends to diminish, deteriorate, and suspend them; and these effects are no doubt owing to the continual pressure which the contents of the cranium are necessarily compelled to suffer, to a greater or less degree, in every instance of this ailment.

"4. As the symptoms of hypertrophy have varied in different individuals, we are not yet prepared to define it with precision and correctness. However, this

affection would seem to be developed very gradually, and under the influence of extremely occult cases.

“The adult age may be considered a predisposing cause, (since, in all the four cases alluded to, the patients were between twenty and thirty years old;) and, as occasional ones, contusions of the head, (Case 1st,) and frequent determinations of blood to that part, (Case 4th.) But though every one of these causes seem to be of an inflammatory kind, yet this affection appears to arise essentially from excess of nutrition. For, if we admit that inflammation is the cause, we must also admit that this identical inflammation has simultaneously invaded all the textures of the brain, and affected them all in the same manner and to the same degree, notwithstanding the different functions they perform, and their ultimate peculiarities of structure. But inflammation does not usually proceed in this manner. In a single organ, and especially in one so complicated as the brain, inflammation often produces at the same time, congestion, ramollissement, suppuration, and induration. These considerations would induce the belief that hypertrophy is the effect of morbid nutrition: and if so, it is not difficult to conceive that the brain, submitted to an uniform stimulus of nutrition, must become eventually more dense in a similar uniform ratio.”—*Lond. Med. and Phys. Journ. Dec. 1828, from Repert. d'Anat.*

22. *Case of Psoas Abscess, pointing on the Anterior part of the Dorsum Ilii.*—“A young and strumous looking woman was long in St. George's Hospital, under the following circumstances. Between the great trochanter and anterior spines of the ilium, in fact at the anterior edge of the dorsum of that bone, was a middle sized tumour, which fluctuated and presented all the characters of abscess, accompanied with hectic and other constitutional symptoms. Mr. Jeffreys, whose patient she was, pronounced the disease to be psoas abscess, though perfectly unable to explain the rationale of its pointing where it did. Latterly, symptoms of phthisis pulmonalis were developed: the young woman fell to the charge of the physicians and died. The swelling, we should mention, was never punctured, and never burst.

“On dissection, the lungs were found greatly diseased, and presented abundance of tubercles and vomicae. The local appearances, however, were those which naturally attracted most attention. The body of the last lumbar vertebra was generally unsound, and partly destroyed on its left side by caries; the inter-vertebral substance between it and the fourth lumbar vertebra was gone. From this point you could trace the bed of an abscess in the substance of the psoas, just above, or more correctly anterior to, the level of the lumbar nerves, down to within two inches of the ligament of Poupart. Here the abscess had, as it were, bifurcated, forming for itself two paths—one in the remainder of the course of the psoas, the other diverging to the outside of the thigh, where the swelling had appeared during life. Let us first pursue the latter. Leaving the psoas at the point above mentioned, the channel of the abscess traversed obliquely the substance of the iliacus internus, crossed beneath Poupart's ligament close to its iliac attachment, held on its way beneath the rectus at its origin, and finally ended at its outer side. The anterior crural nerve naturally lies rather deep between the iliacus and psoas muscles. The abscess, however, taking very nearly this direction, the nerve had it some degree avoided it, by describing the segment of a large circle, and moving much nearer the crest of the ilium. Besides this mal-position, it was matted to the neighbouring parts; notwithstanding all which the patient had complained of no unusual pain during life.

“The other division of the abscess accompanied the psoas, betwixt it and the margin of the acetabulum, as deep as the trochanter minor. Here it formed a cavity nearly the size of an egg, situated, however, at too great a depth to admit of its detection during life, or even to be felt from without after death.

“Thus, then, this case was a compound of common “psoas abscess,” following, perhaps more deeply than usual, the course of the muscle, and another



variety taking this new, and, as far as we know, undescribed direction. The dissection is important, as explaining the quomodo here and assisting diagnosis hereafter."—*London Medical Gazette*.

23. *Case of Suppuration of the Spleen.* By Dr. GLIONNA.—The tissue of the spleen does not appear to be very prone to suppuration. This organ is often discovered, on post mortem examinations, in a state of disease, but its diseases are not often attended with the formation of pus. Dr. Glionna relates a case in the *Osservatore Med. di Napoli* for July, which he considered to be an extensive abscess of the spleen, and which he evacuated by means of a trocar. The result was favourable. The following is the substance of the case:—Dominique Rotunno, aged twenty-nine years, was affected for a long period with obstruction of the spleen, consequent to intermittent fever. An excess of food and of exercise rendered the tumour larger and more painful; and Dr. Glionna discovered at the same time, well characterised splenitis. In spite of bleeding, of the application of great numbers of leeches, of purgatives, and tartarized antimony, the disease gained ground; the tension of the hypochondrium and the pain increased, accompanied with paroxysms of shivering, followed by heat and nocturnal perspiration. The spleen then lost its former hardness; it increased in volume, and became soft at its inferior part. Having found that the inflammation had passed into the state of suppuration, Dr. Glionna now applied emollient cataplasms to the side, and at the expiration of six days, the fluctuation was such as to induce him to propose puncturing the tumour, which was done by means of a trocar, at the distance of about four inches from the linea alba. There immediately issued from the abscess about three pounds of thick, very fetid pus, of a pale white colour at first, and then of a reddish tint. The patient was instantly relieved. The wound was kept open for some days; but by the eighth day it had closed, and the patient, re-established in health, soon acquired flesh and strength.—*Lond. Med. and Surg. Journ. Jan. 1829*.

24. *Bone found in the Heart.*—Dr. BARBIER, of Amiens, presented to the Royal Academy of Medicine, a very slender osseous body, an inch and a half long, and pointed at its two extremities, which he had extracted after death, from the right ventricle of the heart of a man sixty-two years of age. This bone had pierced the ventricle in three places, and had commenced to pierce it in three others. The heart had probably pierced itself in its contractions, as the bone was situated transversely in the ventricle.—*Archives Générales, Dec. 1828*.

25. *Case of Perforation of the Duodenum.* By M. ROBERT.—Louis Laurin, aged seventeen, complained for several months of obscure pain in the epigastrium. For the last six weeks there was, in addition to this, diarrhœa, and for the last ten days, loss of appetite, nausea, and general illness. The 10th of December, 1827, three hours after his repast, which had been more copious than usual, he was suddenly seized with a severe pain, which, commencing at the region of the stomach, soon extended over all the abdomen; he vomited what he had eaten, after which, coloured mucosity and bile were ejected. He was taken on the morrow to the Hôtel Dieu; the face was pale and altered; the skin covered with cold perspiration; the pulse frequent and small; the abdomen tense and very painful; the tongue pale and moist; and he had some bilious vomitings. *Forty leeches to the abdomen*; emollient fomentations. He expired at four o'clock the following morning.

*Setio Cadaveris.*—The abdominal cavity was filled with gas and a quantity of reddish, very fetid, serous fluid; the peritoneum had lost its natural aspect; it presented in diverse points a red colour, running in striæ or in patches; the intestinal convolutions were slightly agglutinated together; the peritoneum was generally little adherent to the abdominal muscles, from which it was easily detached. The mucous membrane of the stomach appeared healthy. At the

origin of the duodenum, close to the pylorus, was found an oval ulceration, from three to four lines in diameter, with round, smooth edges of a grayish colour; the bottom of this ulcer consisted only of the peritoneum, which was of a yellow colour, and presented a perforation of about a line in diameter; which perforation formed a free communication between the cavity of the intestine, and that of the peritoneum. Near this ulcer was found another of a similar size, but not so deep, which penetrated the mucous membrane only. The rest of the intestinal tube was perfectly healthy.—*Journal Universel*, Août, 1828.

26. *Dysentery*.—Dr. CHRISTISON has published in the *Edinburgh Medical and Surgical Journal*, for January last, a very interesting notice of an epidemic dysentery which has lately prevailed in the Edinburgh Infirmary. "The appearances found on dissection were the various stages in the effects of inflammation on the mucous membrane of the rectum, colon, and sometimes too of the lower part of the ileum. In the acute cases, which terminated fatally so early as the tenth or eleventh day, the most extensive derangements of structure were remarked; in the more lingering cases, which after the first eight or ten days assumed the external characters of chronic diarrhœa, and proved fatal in four, six, or eight weeks, the disorganization was in general less extensive. The appearances observed were redness of the inner membrane, thickly scattered ulcerations, most abundant over the longitudinal bands of the colon, commonly occupying and destroying the rugæ, seldom penetrating beyond the inner surface of the muscular coat, frequently stripping that membrane of large patches of its mucous coat, frequently also covered by shreds of lymph, and sometimes by red, spongy, fungoid granulations. Even in the most acute cases, although no scybala had been discharged during life, the colon was found empty of feces. The other organs in the belly were not affected; and in particular the liver, which has been supposed by some tropical practitioners to play an important part in the parallel dysentery of hot climates, did not in a single instance deviate from its healthy condition."

27. *On a Disease of the Stomach, which produces a well defined perforation of its tunics, without softening of their surrounding structure*. We noticed in our last number p. 452, some very interesting cases of this description related by Dr. EBERMAIER, in the *Journal Complémentaire*, for July last. Two or three more cases of the same description are given by Dr. E. which we shall omit, as also the opinions of several physicians cited by him, and proceed to lay before our readers the views of Dr. E. on this subject. He is of opinion that the cases he has related prove the existence of some common morbid cause, which could produce so striking an uniformity in the appearances seen upon dissection. He observes—1. That in every case the disease was extremely slow, being gradually developed in the course of several years. 2. In no instance was the nature of the malady suspected by the physicians. The symptoms were so obscure in some instances, that an affection of the stomach was never thought of. The derangements of the digestive functions were considered to be sympathetic. The fatal termination of the disease was never anticipated. Death sometimes occurred unexpectedly, almost in the midst of apparent health. 3. The disease continued uninterruptedly, without any perfect intervals, as is frequently the case in true nervous cardialgia, although occasionally in so slight a degree that the patient considered himself in health. Severe pain did not usually occur until the last days of the patient's existence, and not always even at that time. The previous pains were slight, limited to a dull sensation of pressure in the precordial region, and to slight spasms. 4. Cachexy never followed this long train of symptoms. Although vomiting frequently occurred, the strength of the patient did not appear diminished, nor did his external appearance indicate the existence of disease. Emaciation occurred only in the case related by Rauch, and that was an example of a complicated malady. In every other no hectic fever was observed, and death was neither the result of

exhaustion of the vital powers nor want of nutrition: it was sudden, and caused by the extravasation of the contents of the stomach, without which the patient might have continued to live. 5. The perforations were always found in the pyloric region, or near it. 6. The most attentive examination could not in any case detect the least vestige of inflammation or suppuration of the other parts of the stomach. The tunics of that organ were perfectly healthy, except in the spot perforated, and rather pale than red. 7. The appearance of the perforation was always the same. Approaching a perfectly round form, and almost always of considerable extent, it penetrated uniformly all the coats of the stomach, so that the portion removed appeared to have been taken away in a very regular manner. The surrounding parts were never softened, nor the edges thinned. There was generally perceived around the opening a tumefied induration, but not tuberculous nor cartilaginous. It was regular, and lost insensibly in the healthy parts.

Dr. E. considers the cases he has related particularly interesting, and calculated to throw some light upon the true nature of these perforations, on account of the adventitious and thickened tissue which surrounded the apertures. It follows that the rupture could not have arisen from the thinness or local weakness of the part, but that it depended upon a regular and uniform process, continuing without interruption from the commencement of the disease.

It may then be concluded, that these regular perforations of the stomach are never the accidental or mechanical result of spasm. That the disease does not consist in scirrhus or cancer of the stomach. That it is not the termination of an ordinary chronic inflammation. Lastly, that it does not result from "ramolissement" of the parietes of the stomach.

28. *Singular case of Insanity caused directly by a fall on the head.*—"A teacher of gymnastics fell from the top of a steep high stair head foremost, and pitched upon his head on a stone floor, where he lay for a few minutes stunned. Next day his physician, Dr. Hausbrand, found him a-bed, in full possession of his senses, and complaining only of a pain in the head, on which no farther injury could be detected except a few superficial excoriations. He had passed a good night, the pulse and respiration were natural, and the functions of the brain were quite unaffected. This prosperous state continued two nights and a day, when matters suddenly took a different turn, without any fresh cause, and in the course of an hour he lost his reason so completely, that he spoke unintelligibly, got out of bed, insisted on leaving the house, stared right before him, would not answer questions, and did every thing confusedly and hurriedly. It was impossible to fix his attention on any thing, or rather he was constantly as it were absent in mind. Bloody serum at the same time issued from the right ear. In twenty-four hours more he became speechless, at least could not articulate, but from time to time uttered involuntary and unintelligible cries, and in reply to frequently repeated questions answered *yes*, without any regard to its meaning. The tongue appeared to have lost its voluntary movements. Being placed in the warm bath, he at first evidently relished it; but on a bucket of cold water being dashed over his head, he screamed out and sprang from the bath, nor could any entreaty subsequently persuade him to enter it again; nay, whenever it was talked of, although in every other particular he was completely unconscious of what went on around him, he became greatly alarmed, and calling out no! no! endeavoured to make his escape. For three days this singular state continued, during which time he never expressed a want, though he ate and drank when food or drink was placed before him, and went to stool when he was placed on the night-chair. He had no sign of bodily illness; but nevertheless his expression of countenance was that of an idiot. At night he slept well and composedly; in the day time he lay passive in bed like one in the deepest brown study. He allowed himself to be undressed without resistance, yet without giving any aid; or to be led up and down the room, but seemed to be perfectly a passive machine, and to have no will of his own what-



ever. Leeches, cold cloths, and blisters were applied without any advantage. After this state had lasted three days, a fit of epilepsy suddenly took place, for which he was bled without any relief; and the fits recurred frequently for three days. Still his stupid moodiness continued. At the end of that period, tartar emetic was ordered on account of some gastric symptoms; and after the operation of this remedy the epileptic fits became much milder. Next day, after the operation of another emetic, they ceased entirely, and the patient for the first time attended to what was going on around him, attempted to speak, and dressed himself. The emetic system was continued an entire fortnight, so as to excite vomiting three or four times a-day; and during this period he recovered entirely, but with the following singular phenomena.

When he first tried to speak, although he evidently had an accurate conception of what he wished to say, he could not find the correct expression, or even a single proper word; but when any one spoke the sentence articulately to him, he repeated it, and with evident satisfaction. He had exactly the appearance of a person who struggled to make himself understood in a foreign language which he spoke but imperfectly. In fact he had lost, not the power of speech, but the knowledge of language; and, what was very remarkable, the languages which he formerly spoke most fluently he had now forgot most completely. A Pole by birth, he spoke Polish most fluently before, and had been in the daily practice of conversing with his countrymen in that tongue; but now he understood much better his German friends than his Polish countrymen. Much less could he speak Polish, while nevertheless he spoke a little German, though not without help. With the Latin tongue he seemed still better acquainted; that is, he had not forgotten it so entirely. With Greek it was different; he had forgotten it as completely as the Polish. He could read Latin or Greek authors with whose works he was formerly acquainted; but he could not translate Greek at all, or Latin without assistance. Every day, however, his command of language increased rapidly; so that passages in Latin and Greek, which were unintelligible one day, he could easily translate the next. His former facility in understanding various languages returned in the following order. First, he recovered his command of German, then he regained his knowledge of Latin, next that of Greek; and in the last place he recovered his command of Polish. It was also remarkable, that in no other respect was any weakness of memory observed, or diminution of judgment, or of any other faculty of the mind. The discharge from the ear bore no relation to its progress; for both when his illness was at its height, and during convalescence, it occasionally ceased for twenty-four hours without any injurious effect. It is added in the narrative, that for some years before, this man was of a gloomy disposition of mind, had a timid look and yellow complexion, and often thought himself sick, but that now his expression is clear, and his temper of mind cheerful.—*Edinburgh Med. and Surg. Journal*, January, 1829, from *Rust's Magazin*, 1828.

29. *Case of Disease of the Bladder, terminating in perforation and fatal extravasation of its contents.* By M. THEVISSSEN.—In our last number, p. 453, we gave some cases in which a well defined perforation occurred in the stomach, without disease of the neighbouring part. M. Thevisсен has communicated to Dr. Ebermaier a case of similar affection of the urinary bladder.—An unmarried woman, thirty-three years of age, whose health had never been disturbed by any serious illness, suddenly complained of very severe pain in the lower part of the belly. No cause could be assigned for the attack. She imagined it was possible that her attack might be dependent upon suppression of the menses, which had existed for four months. The lower belly was highly sensible to the slightest pressure. Thirst excessive. Extremities covered with sweat, and cold as marble. Countenance anxious, and with a yellowish tinge. Pulse small and quick. Abdominal inflammation was suspected, and a severe antiphlogistic treatment was instituted without any benefit. The pains increased in severity. Frequent vomitings of a dark brown substance. The patient gradually

sunk, and died the night after she was attacked. She had had no motion, nor passed any urine, during her short but severe illness.

*Dissection.*—A considerable quantity of fluid escaped from the abdomen, of an urinous smell. There was no trace of gangrene nor of inflammation. All the viscera were healthy. The uterus contained a four month's fœtus. On the posterior side of the bladder, about the middle of its longitudinal diameter, a circular perforation was found, about two lines in diameter. The edges of this opening were neither gangrenous, inflamed, nor hard; they were as smooth as if a portion had been removed by a punch. In every other part the bladder was perfectly healthy.—*Lond. Med. and Phys. Journ. from the Journ. Complementary, July, 1828.*

30. *Case of Paralysis of the Right Side, with Affection of the same Side of the Brain.* By Dr. LEURET.—But few cases have been recorded in which a paralysis of one side of the body has depended upon a disease of the brain of the same side, and even the possibility of the fact has been doubted. Dr. Leuret relates, in the *Journal des Progrès, Vol. XI.* a very interesting case of this description. A man, aged sixty-six, of a sanguineous temperament, was attacked, January 26th, 1828, with paralysis of the right side, with difficulty of speaking. On the 8th of February he entered the Hospital of St. Charles, at Nantz, at which period he presented the following symptoms: mouth half open and drawn to the left side, tongue inclined to the right side, speech slow and difficult, almost complete immobility and insensibility of the right arm; pulse tense and very irregular, respiration abdominal. He died on the 13th of February, and on examination, the cranium and dura mater were found healthy; the arachnoid was opaque on the right hemisphere of the brain, and slightly so on the left; yellowish softening near the right optic thalamus, and the corpus striatum of the same side presented a softened and grayish spot.

31. *Cartilaginous Degeneration of the Stomach.*—Dr. DIEFFENBACH relates in *Rust's Magazin, t. xxvi.* the case of a woman who had for twelve years a moveable, round tumour in the abdomen, which many physicians had pronounced to be a scirrhus ovary. This woman was never affected with nausea, vomiting, or any of the signs usually attendant on scirrhus of the stomach. On examination after death it was found that the tumour was formed by the stomach itself, which had become cartilaginous, and at its anterior part an inch thick: at the posterior part of this viscus only there was a small membranous portion of less thickness. The cartilaginous parietes of the stomach could not exercise any movement or trituration whatever, whence it would result that the movement of this organ is not necessary for the comminution of the food. This specimen of pathological anatomy, so interesting for the physiology of digestion, is preserved in the Royal Museum at Berlin.

#### MATERIA MEDICA.

32. *Laxative of Senna and Prunes.*—"Of the many different methods of preparing this old-fashioned, but excellent domestic aperient, perhaps the following will be found to be the most pleasant and effective. Take of senna leaves half an ounce; supertartrate of potass, half a drachm; water half a pint; boil gently for ten minutes, and strain. To the liquor, put half an ounce of sugar, and half a pound of French plumbs; let them simmer until the liquor be nearly absorbed by the plumbs.

"This old form has the advantage of being easily carried in the memory—half a pint of water, half an ounce of senna, half an ounce of sugar, half a drachm of cream of tartar, half a pound of plumbs."—*Lond. Med. and Surg. Journ. Jan. 1829.*

33. *Variolaria Amera as a substitute for Quinquina*.—According to M. Cassebeer, this species of lichen which grows in abundance on the bark of the beech tree in mountainous forests, possesses a bitter principle similar to that of the quinquina. It results from the experiments tried by the author upon this plant, that it has the same febrifuge properties as the Peruvian bark.—*Archives G n rales*, January, 1829, from the *Magazin f r Pharm.* Feb. 1827.

34. *New Cinchona*.—"M. GONDAT, Professor of Botany at Bogota, in New Granada, has recently discovered a new species of cinchona in the extensive forests which surround the city of Muzo, to which he has given the name *Cinchona Muzonensis*, with the following character:—*Cinchona Muzonensis*, foliis ovata-oblongis, acutis, basi attenuatis, stipulis revolutis panicul  hachiat , corollis albis, limbo imberbi."—*Lond. Med. and Surg. Journ.* Nov. 1828.

35. *Purgative property of Convolvulus Sepium*.—"Twenty pounds of the root of this plant, gathered in April, yielded one pound twelve ounces, avoirdupois, of watery extract, which, in doses of from fifteen to twenty grains, acted freely on the bowels. Haller affirms, that the expressed juice of this herb, taken in the dose of twenty or thirty grains, possesses the virtues of scammony; and hence it is sometimes called German scammony."—*Med. Botany*.

36. *Effects of Bitter Almonds*.—"Half an ounce of bitter almonds eaten in the morning, previously to taking food, produced at the end of half an hour violent pain in the head and nausea, which lasted for three hours; no other signs of poisoning were present. The vapour of ammonia being respired afforded no relief."—*Bull. des Sciences M d.* Juillet, 1828,

## PRACTICE OF MEDICINE.

37. *Case of Gastro-entero-cephalitis, attended with malignant symptoms, and successfully treated*. By M. BROUSSAIS.—The tenth volume of the *Annals of the Physiological Medicine* contains a case of typhus gravior by M. Broussais, which I have been tempted to translate for the perusal of the American physician. It is every way worthy of his serious consideration; a most violent form of fever, attended with alarming symptoms, finally overcome by means so simple and apparently so inefficacious, as to astonish the active practitioner. Could we have the courage to follow *pari passu* the founder of the physiological medicine, and rely on similar means in the treatment of our fatal forms of fever, there is reason to believe that we should less frequently have to deplore the inefficacy of our art, and perhaps never the hurtful tendencies of our remedies. Let the stimulators meditate on this case, and compare it with similar ones in their own hands.

The details might have been considerably abridged without detriment, but I thought it better to give them in full; for the case may be considered, as it regards the power of antiphlogistic treatment in these fevers, a specimen of many others scattered through the volumes of that valuable Journal.

Henry Bethune, student of medicine, aged twenty years, of plethoric, robust, and well constituted habit of body, has been occasionally subject to derangement of the digestive function, which he usually treated with emetics. He has lived in Paris for the last eighteen months, and had more frequent attacks of this complaint, attended with violent head-ache, aggravated, no doubt, by his constant application to study. He had been for some days suffering from this complaint, without however relinquishing his daily pursuits, when on the 26th of February he took a walk with a friend during bad weather beyond the city, and returned to his lodgings in the evening affected with fever.

The next day he was in the following state; tongue coated with white fur,



slightly red at the point and edges; mouth clammy, anorexia, thirst, nausea, tenderness of the epigastrium, diarrhœa, pulse frequent, hard and full, super-orbital pain, sleep frequently disturbed, contusive pains of the limbs. (Venesection; perfect quietude; abstinence; milk and water for drink.)

28th. Same state as yesterday, only the pulse is less tense, the head-ache less violent.

March 1st. The whole abdomen painful on pressure, flatulency, borborygmi, with frequent liquid stools, pulse more frequent, not so full, but harder, head-ache more violent; the patient could scarcely support himself on his feet. An abundant epistaxis supervened during the night, which sensibly relieved him. (Ten leeches to the anus; emollient fomentations to the abdomen; gum water.)

2d. The night was calmer than yesterday; a slight remission of the symptoms.

3d. Aggravation of the inflammatory symptoms; alvine discharges less frequent, tension of the abdomen, delirium during the night.

4th. M. Broussais is called to the patient. Redness of the tongue more circumscribed, appetency for cold drinks, epigastrium tumefied, tense, hot, and very painful; stools suppressed, urine scanty and high-coloured, with enœrema; delirium at times furious, subsultus tendinum; pulse quick, small, and corded. (Fifteen leeches to the epigastrium, five to each temple; refrigerant applications to the head; gum-water for drink.)

5th. Tongue dry, very red towards its point, covered with a fuliginous coat, and the patient scarcely able to extend it beyond the lips; breath fœtid; sensible diminution of the pain and tension of the epigastrium; hypogastrium now tense and painful, borborygmi, discharges of fœtid gas per anum, dysury, continuance of delirium, with loquacity alternating with muttering, carphology, subsultus tendinum, eyes haggard, hallucination, stupor, continual efforts to uncover the extremities, pulse small and quick. Towards night there succeeded to these symptoms a deep comatose state. (Six leeches to the hypogastrium; refrigerants to the head.)

6th. A very copious epistaxis came on about four in the morning, preceded by heat and redness of the face; the hæmorrhage continued to flow during the day and following night. In consequence of this the patient gradually became more rational and collected; the countenance resumed its expression, the pulse rose, became fuller and less frequent; the tongue moister, and the hypogastrium more supple. (Emollient cataplasms to the abdomen; continuation of refrigerants to the head.)

7th. Patient sensibly better. The tongue is less red, and its sooty coating has disappeared; abdomen supple, urine sufficiently abundant, free, and no longer high-coloured. He has had a copious alvine evacuation, very fœtid, and as black as ink; (he had swallowed a great quantity of blood;) pulse less frequent and hard; thirst very great. The arrival of the patient's relatives afforded him gratification, and he conversed with them composedly. (Small enemata of cold water to be repeated two or three times in the day; refrigerants to the head.)

8th. Prostration of strength, somnolency, intense thirst, desire for cold drinks, (he asked for a piece of ice;) abdomen has again become painful and tense, no alvine discharges; urine abundant, pulse again 100. (Refrigerants to the abdomen; cold enemata.)

9th. Same state as last evening. (Same prescription.)

10th. Dryness of the throat; tongue fuliginous; greater tension of the hypogastrium; bowels continue costive, frequent desire to pass urine; slight cough; transitory delirium; continual somnolency; eyes turned convulsively upward; subsultus tendinum. (Six leeches to the hypogastrium; emollient cataplasms to the abdomen instead of the refrigerants.)

11th. Abdomen nearly in the same state; hardness in the left iliac region, attributed to the distention of the sigmoid flexure of the colon. The leech-bites surrounded with a livid areola; frequent desire to void urine, especially after drinking much, it is pale and limpid; slight cough, pulse less frequent; somno-

lency. (A small enema of cold water; emollient cataplasms to the abdomen; acidulated barley-water for drink.)

12th. Much the same as last evening. Skin dry, with acrid heat. (An oily enema given, which produced two scanty, fœtid and black stools.)

13th. Copious stools during the night, of the same odour and colour as the preceding ones. Face pale, bluish, especially about the eyes; tongue, teeth, and lips covered with dark sordes; speech difficult; abdomen swollen and tense; thirst less; urine scanty; pulse frequent and small; cough trifling; delirium transitory. (Cold applications to the abdomen.) Cough increased during the night, became very harassing, and without expectoration; respiration frequent; cheeks flushed; delirium constant, pulse very frequent, small and corded; thirst very intense. (Twelve leeches over the lower part of the sternum; emollients to the abdomen and chest, instead of refrigerants.)

14th. Cough and disordered respiration nearly ceased; face flushed instead of being pale; pulse less frequent and fuller; tongue cleaning off; thirst abated; speech freer; abdomen less tense; urine not so abundant; stools less copious; delirium transitory; the patient asks for food. The subsultus tendinum continues. (Emollient enema; emollient fomentations to the abdomen.)

15th. Complexion clearer; expression of the countenance more natural; great desire for food; he talks only of eating; the sordes on the tongue and lips has nearly disappeared; he can put out his tongue with facility; abdomen supple, except in the right iliac region; has had two stools during the night; pulse less frequent; cough has ceased; delirium very slight. (Same prescription.)

16th. Exacerbation during the night; delirium, agitation, subsultus tendinum; pulse frequent and fuller; cough, with quickened respiration; tongue and lips again covered with sordes; speech embarrassed; thirst more moderate; the patient talks continually about eating; abdomen swollen and tense, especially in the hypogastric region; costive; discharge of urine scanty and involuntary. (Twelve leeches to the hypogastrium during the exacerbation; emollient fomentations; enemata.)

17th. Great prostration of strength; face pale and dingy; eyes dull and sunken; cheeks and temples hollow; deep stupor; lies immoveable on his back, with constant tendency to slide down in the bed; arms perfectly relaxed and powerless; takes no notice of any thing; the organs of sense greatly blunted; continual moaning; lips, teeth, and tongue dry, and covered with brown sordes; deglutition difficult; refuses drink, which seems to pass into the stomach mechanically; cough; respiration at times laborious; pulse frequent, small, and impeded; heat diminished; abdomen sunken and flaccid; involuntary discharges of urine; the body exhales a strong odour of mice; costive. (Sinapisms to the legs; gum-water, with a sixth part of milk for drink.)

18th. The patient scarcely moves his legs; the sinapisms, though very irritating, have produced but slight redness; pulse almost insensible, but frequent; cough continues; chest sonorous; respiration slow and easy; the patient is roused from his stupor with difficulty; abdomen greatly sunken. (Sinapisms.)

19th. Stupor and drowsiness less profound; the patient recognises those about him, and answers tardily but distinctly to questions; deglutition better; pulse fuller and less frequent; cough moderated, and attended with expectoration; voluntary discharge of urine; patient lays on his side; the surface of the body uniformly warm. (Gum-water with milk, and rice-water for drink.)

20th. The night has been calm, as well as the greater part of this day; an exacerbation at night; cheeks flushed; tongue dry and coated; cough more urgent; pulse frequent and full; heat augmented; urine discharged involuntarily; lies on his side; a large eschar has taken place over the sacrum. (Diluted gum-water for drink; emollient enemata.)

21st. Towards morning the somnolency ceased, and the patient became rational; thirst great; desire for food; tongue moist and cleaning off; cough slight; pulse less frequent. Great prostration of strength with emaciation; urine dis-

charged voluntarily; bowels so torpid that the enemata are not discharged. At night a similar exacerbation with the preceding day, with obstinate drowsiness, taciturnity, stupor, moaning, cough, subsultus tendinum; frequent and small pulse; involuntary discharge of urine; lies immoveable in supination. (Sinapisms; enemata; gum-water.)

22d. During the day the same state as last night; sinapisms have produced no effect; exacerbation at night. (Same prescription.)

23d. Same as yesterday; at night the cough is more frequent; the patient seems gay and talks much; continual emaciation; a copious stool obtained by an enema.

24th. Nothing particular; exacerbation at night. (Gum-water for drink; enemata.)

25th. Cough very frequent; respiration accelerated; surface of the chest hot; cheeks flushed; pulse frequent; delirium; agitation; refuses drink; breath fetid; urine discharged involuntarily; he continually uncovers himself, and complains of a weight on his chest which threatens to suffocate him. (Emulsion for cough; enema; cataplasm over the chest.)

26th. Patient much agitated during the night; cough frequent, and constant delirium; more calm in the morning; less pulmonary affection; a desire to void urine. (Emulsion; enemata; tepid drinks.)

27th. Same state; remission during the day; exacerbation at night. (Same prescription.)

28th. Nothing particular; cough relieved; pulse soft but frequent; the excretions very fetid, especially at night; patient continually uncovers himself; complains of the least weight on the abdomen; talks continually about eating and returning home; delirium constant even during the day.

29th, 30th, 31st. Same state. (Enemata.)

April 1st. Cough trifling; pulse frequent and tongue dry during the exacerbation; no thirst; great desire for food; bowels opened; urine scanty and high-coloured. (Enemata; small quantity of decoction of arrow-root.)

2d. Cough increased; pulse frequent; skin hot; cheeks flushed; delirium aggravated; urine suppressed; bowels costive. (Calming potion; gum-water; enemata.)

3d and 4th. Cough trifling; pulse soft and small in the day, frequent at night; also at this time tongue dry, and speech embarrassed; progressive emaciation; eschar over the sacrum detaching with abundant suppuration; great desire for food; sleep at night; urine turbid and scanty; less factor of excretions. (Starch enemata; arrow-root.)

5th, 6th, 7th, 8th. Cough ceased; pulse still frequent, from 90 to 95; emaciation extreme; tongue coated and dry; no thirst; urine scanty and turbid; lips red; senses of sight and hearing morbidly acute; great desire for food; the enemata have brought away a small quantity of hardened faeces; eschar detached; the surrounding parts inflamed, and very painful; hips and elbows on the point of ulcerating; a phlegmon in the integuments of the hypogastrium. (Enemata; gruel; rice cream; vegetable broth.)

9th, 10th. Pulse not nearly so frequent; tongue moist and clean; speech natural; rational; moderate discharge from ulcer on the sacrum; phlegmon on abdomen opened. (Rice cream; diluted milk; small quantity of animal broth.) From this time the food was gradually made more and more nourishing, and the patient gained sufficient strength to leave his chamber in a month, and finally recovered his original health and strength with the loss of his hair.

We are convinced that if the relatives of Bethune had united in consultation, physicians holding different medical opinions, in order to get the *quintessence* of each, he would inevitably have perished. Usually on such occasions some heroic remedy is adopted, and we are decidedly of opinion that a blister, sinapisms, or animal broth had recourse to, before the irritation had left the upper part of the intestinal canal, would have prevented the resolution of the disease, and finally exhausted the strength of the patient. When a gastro-enteritis is



very intense, it sometimes continues even till extreme emaciation is induced, and then is entirely removed. But if the physician, alarmed by the progress of the emaciation, trusts to stimulants before the digestive organs have lost their excessive irritability, which causes the brown sordes of the tongue and lips, and the stupor, the patient sinks in a few days. Hippocrates, who did not employ stimulants in acute diseases, sometimes saw these cases continue even to the hundredth day; but, since the stimulant doctrines have predominated in the schools, we no longer witness these protracted cases. *Malignant, nervous, putrid, adynamic, ataxic* fevers are of short duration in the hands of the stimulants. We cannot endure the sight of a patient suffering for many weeks extreme prostration, with stupor and carphology; we imagine the inflammatory period to have passed away; we stimulate in order to strengthen, and we are far from attributing the fatal event to the use of these stimulants.

Many physicians, who consider themselves more physiological in their notions than others, imagine that the gastro-enteritis in such cases as the above, has given place to arachnitis, and accordingly combat this affection with sinapisms and blisters. This practice is almost as dangerous as the other. In this way do we keep up the inflammation of the mucous membrane of the digestive organs, which finally wears out the patient's strength or extends the irritation to the vascular system, and even to the heart. We have before said, and we now repeat it, that decided inflammation of the brain is a rare disease. Inflammation of the digestive canal is of itself capable of producing prostration, delirium, and stupor; arachnitis is attended with convulsive symptoms, much more violent than those which we observe to occur in the *putrid fevers* of authors. Besides, should there be even cerebral inflammation, that would afford no good reason for the employment of blisters and sinapisms. We have a long time ago objected to this practice, and Professor Lallemand, of Montpellier, has since condemned it in the most decided terms from practical observation in his excellent work on affections of the brain. Why, then, continue to torment with rubefacients and blisters such as present some nervous symptoms in acute diseases? The words *cerebral fevers* has of late superseded in the parlance of physicians the terms *adynamic fever, ataxic fever*: the vulgar repeat the phrase, become accustomed to see blisters to the legs, and sinapisms to the feet, while ice is applied to the head, and now almost always require the conjunction of these remedies. It demands all the firmness of the physiological physician to resist. He should nevertheless remain unyielding; for violent stimulation of the skin only adds to the intensity of a gastro-enteritis, sufficiently severe to resist an active antiphlogistic treatment for the first few days. C. D.

38. *On the Hydrocyanate of Iron as a substitute for the Quinine.*—Dr. HASSE has employed with success the prussiate of iron in an intermittent fever which prevailed at Güstrow in the spring of 1827. The sulphate of quinine was successful in almost every case, but as its expensiveness prevented Dr. H.'s prescribing it in all cases, he determined to try the efficacy of the Prussian blue. When the patient presented gastric symptoms, which was frequently the case, Dr. H. on the first appearance of the precursory signs of the paroxysm, administered five grains of ipecacuanha every ten minutes, until vomiting was produced; or according to circumstances a laxative during the apyrexia. The hydrocyanate of iron was then administered in the following form:—℞. Hydrocyanate of iron, grs. xij.—aromatic powder, or white pepper or mustard in powder, half an ounce; mix and divide into twelve powders; one powder to be taken every four hours during the apyrexia. Of course from four to six powders were usually taken. Commonly the paroxysm which followed the administration of the febrifuge was so mild that three powders were sufficient in the second and third apyrexia, to keep off entirely the third paroxysm. To prevent its return, Dr. H. gave two powders on the seventh, fourteenth, and twenty-first days, and the fever did not return. The prussiate of iron administered in the above manner never produced ill effects, either upon the digestive

canal or upon the brain. It was, however, injurious in one case of fever, accompanied with great pain in the spleen, increased at each access of pyrexia, and with a painful swelling of the left foot. These disorders being removed by appropriate remedies, the prussiate of iron showed its accustomed efficacy. Many of those who were cured by the prussiate of iron had previously tried the pepper without benefit, so that the cure cannot be ascribed to the pepper which was contained in the above formula.—*Hüfeland's Journal*, June, 1828.

The above affords a most gratifying confirmation of the opinion expressed by our collaborator, Dr. Jackson, of Northumberland, of the efficacy of the prussiate of iron in intermittent fevers. See his interesting paper, Vol. II. p. 335.

39. *Method of Arresting the Bleeding from Leech-bites.*—The usual applications for arresting the hæmorrhage from leech-bites sometimes fail, and it becomes necessary to resort to the actual cautery or ligature. S. RIDALFO, of Leghorn, recommends a more simple means which he has found both safe and effectual. It consists in applying a cupping-glass to the wound, when a coagulum is almost immediately formed, and the bleeding arrested. This effect is very quickly produced, and has been found to take place even in children, and in persons where the mass of the blood appears to be in a state of dissolution, and without any tendency to coagulation. The instrument may safely be removed within a few minutes, but it is prudent to let the coagulum remain for some time.—*Repertorio di Medic. and di Chirurg. di Torino*, July, 1828.

40. *Hydriodate of Potash as a Cure for Cynanche Parotidea.*—DR. NEUMANN employed the hydriodate of potash as an external application with great success in an epidemic cynanchea parotidea, which prevailed at Neustædtel in June, 1823. In the lower classes who were treated by the ordinary means, the disease was very obstinate, and often terminated by suppuration. Among the richer classes the treatment consisted alone in the administration of an emetic, and the application to the swelling, of a plaster composed of eight parts of mercurial ointment, and one part of hydriodate of potash. By these means a cure was always effected in three or four days, and Dr. N. says that in none of those treated by this method did metastases occur to the other organs, which so frequently happen in this disease, and he attributes this fortunate circumstance to the appearance of an erythematic eruption which occurred on the first or second day, and which remained during eight or twelve days.—*Rust's Magazin*, 1826.

41. *On Transfusion.*—DR. DIEFFENBACH of Berlin has made many experiments relative to transfusion; and he has found that if an animal be brought into a state of asphyxia by copious bleeding, it is not unfrequently restored to life by transfusion of blood from an animal of the same species; in most instances, however, it dies instantly, or very soon after the operation. Death always ensued when, during the asphyxia, a considerable quantity of blood from an animal of another species was injected, even though the quantity of blood injected was very small, as was generally the case in these experiments. Some animals appeared to be more easily affected by a different blood than others; cats and dogs for instance, more than sheep. Cold blooded animals almost always died after the injection of the serum of blood from warm blooded animals. Birds seemed to be unable to bear even the smallest quantity of blood from a quadruped; they died instantaneously, and under the most violent convulsions.—*Rust's Repertorium*.

42. *Transfusion in a Still-born Child.*—DR. DIEFFENBACH relates the case of a child who was extracted by the Cæsarian section, the mother having died during delivery. The child was in a state of asphyxia and bleeding; the warm bath and frictions failed recovering it. Two ounces of blood having been injected into the umbilical vein, some movements in the face were visible, but life was not restored.—*Ibid*.

43. *On Bleeding in the cold stage of Intermittent Fever.*—Dr. STOKES of Dublin, has investigated the utility of this practice, on an extensive scale in the wards of the Meath Hospital; and he has published in the *Edinburgh Medical and Surgical Journal* for January last, the results of his investigations. These are certainly against the indiscriminate or even frequent use of bleeding in the cold stage of ague. In the great majority of cases, quinine had to be administered before the disease was eradicated; many of them had an extremely slow and dangerous convalescence; in several instances the disease, so far from being relieved, appeared exasperated by the practice; and Dr. S. thinks that the bleeding appears to have a tendency to convert intermittent into continued fever. He says that in none of his cases did any bad effect from sinking of the powers of life follow the practice immediately; but that he is informed that in the practice of a highly respectable individual, there occurred two cases in which the patients did not recover from the collapse produced by bleeding in the cold stage.

Dr. Stokes also quotes extracts of letters from Dr. Kelly of Castlereagh, and Mr. Gill of Nottingham Park, giving the results of their experience. The former states that he has found the general effect of bleeding in the cold stage, that of cutting short the rigor and rendering the hot stage generally milder and in general of rendering the disease more manageable by other remedies—but in some cases the disease has appeared to have been exasperated by the practice. The latter has employed the remedy in thirteen cases, and says he considers it not only useless but dangerous, when *indiscriminately* followed. They all, however, acknowledge that there may be cases in which it would be useful, but they do not designate the circumstances in which it should be employed.

There is one curious objection brought against the practice by Dr. Stokes, which is, that it has a tendency to excite local inflammations. This we confess we cannot understand, and must believe that when such inflammations have supervened, they were a mere sequence and not a consequence of the bleeding.

44. *Itch cured by Chloride of Lime.*—In Vol. II. p. 209, we mentioned that the chloride of lime had been recommended by Dr. Derheims, as a cure for the itch. It is stated in the *London Medical and Surgical Journal*, for November last, that Dr. Johnson of Linn, has cured a family of seven persons, affected by scabies papaliformis, by a bath formed of one part of Fincham's chloride of lime to six parts of water. They remained in the bath for ten minutes; this was repeated daily for six days; the disease was not felt by the patients after the second application.

45. *On Brome as a cure for Scrofula and Goitre.*—Dr. POURCHE has employed the brome in the treatment of scrofula and goitre, in two individuals of a lymphatic constitution. The scrofulous tumours were dissipated by the use of frictions with an ointment containing hydrobromate of potash, or by the employment of cataplasms sprinkled with a watery solution of brome. In a third case, an old and scrofulous engorgement of the testicles yielded to the use of the same means, with the internal administration of brome. An enormous goitre had lost two-thirds of its size, when Dr. P. published his observations. Dr. P. administers the brome internally, sometimes dissolved in water, in the form of hydrobromate. In the first case he dissolves one part of brome in fourteen parts of distilled water, and gives five to six drops in a portion of pure water, and gradually augments the dose. Of the hydrobromate of potash he gives from four to eight grains daily in pills.—*Journ. de Chim. Med. Dec. 1828.*

46. *On the treatment of Metallic Colic by Sulphate of Alumine.* By M. D. MONTANCEIX.—For thirteen years M. KAPELER, physician to the Hospital Saint Antoine, in which every year from fifteen to twenty individuals affected with metallic colic are admitted, has treated this disease successfully with sulphate of



alumine. M. Montanceix reports, in the November number of the *Archives G n rales de M decine*, ten cases cured by this remedy, in some of which the common and unphysiological treatment by drastic purgatives, sudorifics, and narcotics failed. The dose of the sulphate of alumine is from one to two drachms in the twenty-four hours; one drachm is usually sufficient to commence with. It should be mixed with some mucilaginous emulsion, and a table-spoonful taken every hour, so that the requisite quantity may be taken in the twenty-four hours. Mucilaginous drinks and laxative enemata, were used as adjuvants in the cases reported.

47. *Transfusion in Hydrophobia.* DR. DIEFFENBACH, of Berlin, relates in *Rust's Repertorium* a case of hydrophobia in which he has lately employed transfusion, but without any apparent effect. The patient was a middle aged man, who had been bitten four weeks before he was seen by Dr. D.; at this time he was tranquil, and fully conscious of his state, but the eyes had a somewhat wild expression; the pupils were dilated; the pulse ninety-two, slow and intermitting, with two quick pulsations, full and sharp; he had burning thirst, but so violent a dread of water that the least attempt to drink caused convulsions. He had taken an emetic, and afterwards calomel with belladonna; but these means having no effect, and his state becoming worse, transfusion was resolved upon. After a bleeding of twenty-four ounces; twelve ounces of blood were, at two different periods, injected. At each injection the pulse rose and became regular, and after some time the dread of fluids seemed to diminish; in order to quench the violent thirst, a few ounces of water were injected into the stomach. In the evening the patient had some shivering, and was feverish; the pupils remained dilated, even in the strongest light. On the next day no change had taken place, only the dread of water, had again diminished; some ounces of the decoction of senista were injected into the stomach. He was bled to thirty-two ounces, after which twelve ounces were slowly transfused, but without any effect. On the following day, the patient had considerably changed; the face was pale, the eyes glassy, and the dread of water so violent, that he was taken with shivering only at the sight of it. In the afternoon, after a bleeding of six ounces, five ounces of blood were again injected; immediately after the operation the patient drank some water, but died an hour afterwards, in convulsions.

DR. MAYER, of St. Petersburg, also relates in *Hufeland's Journal*, a case in which he employed transfusion, but with similar want of success. The patient was a man forty years of age, who had been bitten in May 1820, by a cat. The wound healed in four days. On the 19th of March 1821, he was tormented by a violent venereal desire, which, however, he did not satisfy, and in the evening he became morose, and had all the precursory symptoms of rabies, which first manifested itself on the 25th of May, by a violent shivering and a terror at the sight of the holy water, in a church. He was immediately carried into the hospital, and soon exhibited all the symptoms of confirmed hydrophobia. The contact of tepid water caused less shivering and convulsions than that of cold water, and there was no dread of bright surfaces. The cicatrix of the wound was scarified, and covered with a blister; five ounces of blood were taken from the arm; and, according to Magendie's plan, a pint of water, at 101 degrees, was injected into the cephalic vein of the right arm, during which operation the patient had a burning sensation in the left subclavian region: after it, the pulse fell from 90 to 60, and became very small. This injection of warm water was twice repeated in the space of about eight hours, and accompanied by nearly the same symptoms; the vein became, in its whole course, turgid and painful, and the patient complained of a very unpleasant sensation of heaviness in the region of the heart. At midnight a profuse perspiration came on, especially on the chest, without, however, being followed by any alteration in his state. On the 25th of May, the injection was repeated; to the dread of water, a per-

fect horror of wind, or any movement in the air, succeeded. At noon, he was prevailed upon to take some hot beer, of which he at last, by means of a long tube, succeeded in swallowing three ounces; it was, however, soon brought up again. On the 26th, tepid water was injected a fifth time, but tetanic convulsions supervened, and he died the same day.

On examination, the pia mater was found much infiltrated; the substance of the brain hard and injected; the vessels of the pons Varolii and medulla oblongata, particularly near the origin of the auditory, fascial, pneumogastric, glosso-pharyngeal and hypoglossal nerves, were gorged with blood; the arachnoid of the spinal chord was injected, and contained a serous effusion; the salivary glands were filled with a dark liquid blood.

48. *Pustular Venereal Eruption, treated by the Subcarbonate of Ammonia.*—P. M. thirty-eight years old, emaciated, and of a very weak constitution, observed, in the month of July, a particular eruption on his forehead; this having been suppressed for a time, by a nostrum, the composition of which was unknown, soon returned again, with a tendency to form ulcers, and began to spread over the whole body. On his admission into the hospital, in September, under the care of M. Biett, he was in the following state:—Almost the whole of his body, but especially the inferior extremities, were covered with ulcerating pustules of different sizes; in the centre of each pustule there was a prominent, black, very hard crust, surrounded by a white ulcerating margin; the epidermis round the ulcers presented a copper-coloured defined areola. In those pustules, where the crusts had been detached, the surface was excavated, much injected, and covered by grayish-white tenacious matter; the skin, between the pustules, exhibited livid blotches, the scars of former ulcers. The patient had, in 1814, successively been affected with gonorrhœa, chancre, and bubo, and had never had recourse to a proper mercurial treatment; he was married, and his wife, who had borne several healthy children, had never presented any signs of infection. His general health was good.

M. Biett, having for some time employed cinnabar fumigations, and the alkaline bath, prescribed the subcarbonate of ammonia, from the use of which, he had, in similar cases, observed very satisfactory effects; the patient took a drachm daily, and this, being borne very well, and without the least disturbance of the digestive organs, the dose was afterwards increased to two, and even to three, drachms. The crusts were gradually detached, and the excavated ulcers became more superficial, and assumed a healthy appearance; so that the patient, after having used the subcarbonate of ammonia for twenty days, was perfectly cured.—*Journal Hebdomadaire de Médecine.*

49. *Psoriasis Inveterata, successfully treated by the Arsenical Solution.*—Xav. Host, ætat 39, of a vigorous constitution, was, on the 7th of September, admitted into the hospital, under the care of M. Biett. Having, up to his eighteenth year enjoyed good health, he observed at this period, without any previous cause, a scaly eruption on his legs and thighs; the scales were very small, dry, of a whitish colour, and slightly adherent to the skin, from which they were detached by the least friction, leaving some elevation and redness. In this state the patient continued for several years, without any disturbance of the constitution; sometimes, especially in winter, the eruption disappeared entirely; but, on returning, it insensibly extended over the whole body, and the scales began to change into thick crusts, which were firmly attached to the skin. During the last three years he had been much addicted to drinking, in consequence of which the disease had become so serious as to induce him to seek for medical aid. When admitted into the hospital he had, for the last six months, been in the following state:—The whole body, with the exception of the parts exposed to the air, and the genitals, was covered with large, irregularly oval crusts, of different thicknesses; their surface was beset with white scales, which, according to their longer or shorter standing, were more or less firmly attached to the parts

beneath. The skin over the joints, and of the thighs, was covered with very thick, rigid crusts, with large furrows filled by a bloody ichorous matter, so that the patient was almost entirely deprived of the use of his limbs. His general health was not affected, his digestion was good, &c. After a bleeding of ten ounces, and the use of some aperients, M. Bielt prescribed the arsenical solution, of which the patient took four drops daily, and this dose was afterwards gradually increased to twelve drops. The effect on the cutaneous disease was astonishing; the crusts, which before had been remarkable for their rigidity and torpid appearance, gradually detached themselves from the skin, leaving, at first, large red blotches, which were again covered with scales, but after repeated desquamation the integuments gradually assumed their natural colour and appearance, so that it was found unnecessary to continue the use of the medicine for more than four weeks, after which period, the vapour bath having been employed for some time, the patient was perfectly cured.—*Ibid.*

50. *Incipient Paralysis cured by Bleeding from the Arm.* By M. BROUSSAIS.—A gentleman aged sixty-five years, who had been for many months subject to vertigo, whilst walking; after returning home on the afternoon of the 29th of July, without having breakfasted, felt himself much worse; and on taking a seat he fell down, a circumstance which he did not afterwards remember. He was put to bed, when he commenced to stammer, his speech was embarrassed, his mouth a little turned to the left, his right limbs most feeble. The nearest physician was sent for, who ordered an infusion of linden, and orange flower water. M. Broussais saw the patient in the evening, and found him affected with difficulty in speaking, dullness, imperfect memory, slight distortion of the mouth, slight inflection to the tongue to the right side; great feebleness, and also torpor of the right limbs; face very much flushed; pulse small, feeble, and slow. Dr. B. had him bled about twenty ounces, which produced a little faintness, but he spoke better. Ordered lemonade with privation of all food. The next day the patient was wonderfully better, spoke with his usual volubility, enjoyed all his faculties, was a little weak only, had a good appetite.

If we ask, says Dr. B. why the physician who was first called to see the patient had not at once recourse to bleeding, we will find that he had in view but to remedy a nervous state considered in a vague manner, there was something wanting to the group of symptoms which he considered as indicating a sanguineous congestion in the brain, there was wanting a strong and full pulse. These being absent, he considered it merely as a nervous state to which he opposed the linden and orange flowers, until the entity disease had assumed all the characters, of which it had out of malice omitted the most important.—*Annales de la Médecine Physiologique, Sept. 1828.*

51. *Treatment of Hydrophobia with Chlorine.*—MM. SEMMOLA and SCHOENBERG are said to have employed chlorine in the treatment of hydrophobia, with success. It is used in the following manner: the wound is to be washed as soon as possible with the chlorine in water, and afterwards covered with lint impregnated with the solution, and this treatment is to be repeated twice a day till the wound cicatrizes; but if the wound does not heal by the end of five days, it is then to be treated in the ordinary manner. If the wound has healed before employing the chlorine, it is to be cauterized with the butter of antimony, and when the eschar separates the lotion is to be used. During the first five days, the chlorine is to be given also internally, in doses of two drachms in an ounce of sweetened water, three times a-day. Care should be taken in its administration, for if given in too large doses, or not diffused in a sufficient quantity of water, it will be injurious.—*Bulletin des Sc. Med. July, 1828.*

52. *Fumigation of Belladonna in Phthisis Pulmonalis.*—Professor CRUVEILLIER has employed for some time, with success, in the treatment of phthisis pulmonalis, fumigations with the leaves of belladonna previously dipped in a



strong solution of opium and partially dried. The patients commence by smoking two pipes a day, and gradually increase the number till five or six are used in the same period. In eight patients upon whom the remedy has been tried, some in the second and others in the third stage of the disease; in the former the cough was rendered much less frequent, and no longer prevented sleep, the irritation of the larynx was removed, the dyspnœa diminished, the expectoration less abundant, the fever lessened, and the emaciation arrested; in the latter the sweats were less frequent and less abundant, heat lessened, expectoration facilitated, colic and diarrhœa assuaged, fever restrained, finally, it may be said that the disease is arrested.—*Nouv. Bibl. Méd. Sept. 1828.*

53. *New Mode of Treating Tænia, discovered by Dr. SCHMIDT, of Berlin, and described by M. CASPAR, by order of the Prussian government.*—On the 14th of October, 1823, Dr. C. A. Schmidt, of Berlin, announced to the minister of public instruction, and medical affairs of Prussia, that he had, twenty years since, discovered an infallible remedy for the tape-worm, and was desirous of selling his secret to government. The minister directed Dr. Natorp to make trials with the practice, and, in a report made the 25th of July, 1824, this physician pronounced the treatment of Dr. Schmidt to be excellent; that it was adapted to the most feeble constitutions; brought away the tape-worm within twenty-four hours at furthest; called for no previous preparation, and caused no more exhaustion than a common purgative. Messrs. Kluge and Neuman, physicians to the hospital of La Charité, at Berlin, were commissioned to repeat these experiments. In the report made by these gentlemen, on the 31st of October, 1826, they express themselves thus:—"The method of M. Schmidt never failed in its effects when the presence of the tænia was established, and in those cases wherein it failed to produce the evacuation of a worm, the existence of this was regarded as doubtful. At the same time, the treatment is prompt, without danger or exhaustion, and the worm is expelled entire and alive." In consequence of the report made him by the minister, the King of Prussia granted Dr. Schmidt, on the 31st of March, 1827, a pension of one hundred and fifty dollars for the publication of his remedy, which he described as follows:—First day the patient takes in the morning, fasting, two-spoonful of the following preparation, and the dose is to be repeated every two hours till seven o'clock in the evening.

No. 1. Take powder of valerian root, six drachms; senæ leaves, two drachms; make into an infusion of six ounces, to which add sulphate of soda, three drachms; syrup of manna, two ounces; oil of tansy with sugar,\* (oléo-saccharum de tansie,) two drachms. Mix.

The patient drinks coffee made very sweet, and without milk; at noon plain soup with some morsels of herring, and the roe of this fish; at eight o'clock in the evening a salad made of herrings, raw ham sliced, one onion, with a considerable quantity of oil and sugar. The patient most commonly expels, even on the first day, some portion of the tape-worm. In two cases M. Schmidt has even seen the worm evacuated whole from this preliminary treatment alone. The second day the patient takes every hour, beginning at six o'clock in the morning, the following pills:—

No. 2. Assafoetida, dogs-grass, (chiendent,) each three drachms; powdered gum gamboge, rhubarb and jalap, each two drachms; powdered digitalis, ipecacuanha, golden sulphuret of antimony, each twelve grains; calomel, two scruples; oils of tansy† and anis, each fifteen drops. To be made into a mass, and divided into pills of two grains each, which are to be kept in a well-stopped bottle.

These pills are taken with a tea-spoonful of syrup. Half an hour after the first dose, the patient takes a table-spoonful of castor oil, and through the day drinks freely of coffee well sweetened. In most instances the worm is evacuated about two o'clock in the afternoon, in which case the pills are to be stop-

\* This is prepared by adding twenty-four drops of oil of tansy to one ounce of loaf-sugar.

† Obtained by distillation of the fresh plant.

ped; but where, on the contrary, only fragments of the *tænia* are passed, these pills are to be continued along with which a spoonful of castor oil with sugar is to be given from time to time: the treatment is to be discontinued whenever the evacuations cease to contain any of the worm. At noon the patient takes nothing but broth, and in the evening some soup with fresh butter and sugar. To make sure that, (to use the author's mode of expression,) no more of the *nest of the tænia* remains, the patient may still take some of the pills in the morning. To prevent relapses, the patient ought occasionally to eat herring salad and horse-radish with vinegar and sugar; or, otherwise, he should continue for some time to take, about every eight days, one or more doses of the pills. When the treatment is finished, the patient is allowed to eat gruel, young meats, chicken, pigeon, the yolks of eggs, good wine in small quantity, and some kind of bitters.

Where it is not certain that tape worm exists, the following method of ascertaining its presence or absence is adopted. The patient eats herring salad in the evening, and drinks freely of sugar and water; the following morning he uses the following powder in syrup: take powdered jalap, gr. xv. wormseed, gr. x. gum gamboge, calomel, aa. gr. vi. oil of tansy, (oléo-saccharum,) ʒi. After this powder, the patient drinks coffee made very sweet, or very fat broth. The powder produces copious alvine evacuations, and if the patient be affected with *tænia*, joints of it, or sometimes the entire worm, will appear in the stools. In this last case, the pills are to be followed up by the treatment No. 2, for the purpose of establishing a complete cure, should there be more than one *tænia*.

Dr. Schmidt does not employ his treatment during pregnancy, nor immediately before or after the menstrual period, nor with individuals affected with inflammations, phthisis, marasmus, hæmorrhoids, hæmoptysis, or senile debility.

Of one hundred and sixty-six persons cured of *tænia* by Dr. Schmidt, but fifteen were men, twenty had but one *tænia*, and all the others more, one evacuated as many as seventeen. After the publication of Dr. Schmidt's treatment, the experiments were repeated at the Hospital of La Charité, in Berlin, with constant success, as shown by the six cases which close the memoir.—*Archives Générales*, January, 1829, from *Hufeland's Journal*, August, 1828.

54. *Neuralgia Facialis*.—The *Osservatore Medico di Napoli*, No. 18, contains an account by Dr. CAMPAGNO, of a case of neuralgia facialis which was cured by the vinous tincture of colchicum. A multitude of remedies had been previously tried without effect.

55. *Dysentery*.—Dysentery has recently prevailed to a considerable extent in the Edinburgh Infirmary. The treatment adopted by Dr. Christison, "consisted at the commencement in the liberal use of opium, preceded in some instances by the free application of leeches to the lower part of the belly, and frequently accompanied with the application of large blisters, and with the use of the warm bath. If the stage was passed during which feculent matter was discharged, and the evacuations had become muco-sanguinolent or sero-sanguinolent, I usually directed the application of the leeches to be immediately followed by doses of pure opium, of such magnitude and frequency as were found necessary to check the unremitting diarrhœa and tormina; and sometimes the desired effect was not procured till the patient was pretty strongly affected by the narcotic action of the drug. In urgent cases twenty or twenty-four grains in the twenty-four hours were sometimes necessary from the very beginning; in the slighter cases four or six grains were sufficient. When an impression was once made on the discharges, it was maintained by doses of two or three grains repeated according to circumstances; and frequently the exhibition of opium by the mouth was conjoined with its employment in the form of suppository. I never but once found this plan to fail in checking the discharge of blood in twenty-four or forty-eight hours, if the patient was seen within three or four days; but the blood often reappeared abundantly in the stools, if the opium was

intermitted on account of its causing too complete constipation. After the hæmorrhage was permanently checked, the frequent thin feculent stools continued many days, sometimes many weeks, indicating, it is to be presumed, the existence of ulceration, which consequently must have taken place at a very early period of the disease. The opium, it is worthy of remark, rarely caused sickness or dry tongue. In cases in which the stools continued long thin, and with a tendency to be tinged now and then with blood, an opportunity occurred for trying various remedies which have been supposed to be useful in this stage by accelerating the cicatrization of the ulcers. But I cannot say that any of them appeared to be of use, unless opium was combined with it in such quantity as to be itself a powerful agent. The acetate of lead was perhaps an exception; it certainly rendered the stomach less irritable, in the few cases in which opium alone was rejected by vomiting; and although I had too few opportunities of trying it in idiopathic dysentery, the experience I have had in the Fever Hospital and Infirmary fever-wards of its good effects in the chronic dysentery which is sometimes left after fever, induces me to think that its alleged virtues in the chronic stage of idiopathic dysentery have not been exaggerated. Neither ipecacuan, nor nitric acid, nor calomel administered so as to affect the mouth, appeared to me materially useful. I have had but one opportunity of trying the effect of calomel in scruple doses upon the early stage of the disease. It was given on the fourth day with marked advantage certainly, and was repeated next day with equally good effect. But ulceration had evidently taken place before the patient came under my charge; and although the acute symptoms were checked, yet, as the patient was an emaciated subject transferred from the surgical wards with a recently-opened, extensive, chronic abscess, he sunk under the exhausting purulent discharge from the bowels and abscess together. The only other patients I lost were two in number,—one an old man of ninety, who entered the hospital on the eighth day of his illness in a state of extreme exhaustion, so that, although the stools were checked, he died two days afterwards,—the other, a young woman, who immediately after coming out of an exhausting and tedious attack of continued fever with marked enteric symptoms, was seized with dysentery in its worst form, and died on the tenth day without experiencing any relief from treatment beyond the allaying of pain.”—*Ed. Med. and Surg. Journ. Jan. 1829.*

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## OPHTHALMOLOGY.

56. *Complete Amaurosis cured by the application of Leeches to the Nasal Fossæ.* —Dr. GUEPINET of Landrecies, relates in the *Annales de la Médecine Physiologique*, Vol. X. the case of a child aged five years, who was suddenly attacked with complete amaurosis, without any known cause. The disease resisted the usual remedies for nearly two months and a half, when Dr. G. being consulted, he advised the application of leeches to the nasal fossæ. The day after their application the child was able to see a little; thus encouraged, Dr. G. had one or two leeches applied daily for a week, at the end of which period the child's sight was entirely re-established.

57. *Singular Tumour in the Eye successfully extirpated.* By H. CLARKE, Esq. —The subject of this case was a Hindoo, aged four years. A tumour nearly globular, and of the size of a common orange, projected from the left orbit. “This enormous excrescence was firm and tense to the touch, and presented anteriorly a granulated surface of a florid aspect. Its posterior circumference was of a dusky hue, and was covered by a shining membrane. On its anterior superior portion was situated the protruded eye, compacted into an unyielding fibrous mass, of an irregular oviform figure, apparently destitute of the slightest



vestige of its previous organization. The superior and inferior palpebræ were distended to their utmost limits by the tumour, which, from its firm attachment to them, had dilated the integuments to a considerable extent, in its gradual progress from the bony cavity. The history of this case is involved in obscurity."

Mr. Clarke being satisfied of the necessity of extirpating this tumour, proceeded to the operation June 26, 1826, assisted by Mr. Thompson, who grasped the tumour, whilst Mr. Clarke "detached the adherent eyelids, and dissected the tumour from its firm attachments in the bony cavity. It was so firmly imbedded in the socket, that a little patience was required in order to insinuate the scalpel with effect. As the dissection advanced toward the base, the compact structure which invested the tumour gradually merged into a softer substance; which, when in contact with the remains of the orbit or vessels, terminated in a pulpy mass, partaking of the character of the tumour, which more nearly resembled the medullary sarcoma of Abernethy than any other species.

In substance it was exceeding like a portion of brain, of a dark, dusky hue. A small quantity of matter, of the consistence of thick cream, and in colour of a red tinge, escaped from a depending part, on an incision being made. The disorganized eye was converted into a homogeneous mass of a fibrous nature, retaining only in its posterior portion any traces of its former character: in this part a fragment of the sclerotic with the choroid coat, could be distinctly traced. The tumour being removed, its place was filled with lint, and the eyelids again brought into contact; a compress was now applied, and the whole supported by a bandage.—23d. On removing the dressings this morning, the cavity of the orbit presented a healthy purulent secretion. Renewed the application of dry lint:—26th. Healthy suppuration appears to be established; the bottom of the orbit is covered with yellow consistent pus. Care was taken to fill the cavity with lint, as formerly.—29th. This morning appearances continue perfectly healthy.

"The above tumour, in a modified sense, may be considered as encysted, the adjacent cellular substance being condensed into an investing membrane of considerable tenacity. A portion exterior to the palpebræ, and also within the cavity, was enveloped by it. As observed above, the covering was gradually lost in the medullary substance at the bottom of the orbit, where the remains of the recti muscles existed, unaltered in their structure. Some venous blood escaped from the turgid vessels, on making the first incisions, but subsequently the hæmorrhage was trivial."—*Transactions of the Medical and Physical Society of Calcutta, Vol. III.*

58. *Case of Fungous of the Globe of the Eye successfully extirpated.* By W. TWINING, Esq.—"A healthy, but rather slight made Hindoo, about fifty years of age, applied at the Eye Infirmary on the 17th February, 1826, having a fungus that protruded from between the right eyelids, larger than an egg: it was of red colour, hard, and its surface irregular or granular, like a firm cauliflower, and when handled or pressed, there was little bleeding, but always a puriform discharge.

"The tumour appeared to grow from the whole of the eyeball; it was moveable, and the base was firmly girt by the eyelids, but not attached to them: in fact there was no very strong attachment apparent, except at the lachrymal gland. It filled the whole front of the orbit, and protruding, as above stated, was not only a hideous deformity, but was productive of severe pain in the orbit and head. The weight and pressure of the protruded portion of the tumour which rested on the cheek, had there caused ulceration of the skin. The disease had been fourteen months in arriving at this state, and was preceded by inflammation, which the man said arose from a particle of straw blown into his eye by the wind.

"On the 5th of March I extirpated the disease with a common scalpel. The

base of the tumour was so firmly girt by the aperture of the eyelids, that an incision was first requisite from the outer corner of the eye towards the temple, so as to give more room for the operation, which was then accomplished in less than a minute by a few strokes of the knife. Two arteries bled freely; and were secured by ligatures. A piece of lint was placed over the closed lids, and over that a sponge retained by a bandage.

"There was no unfavourable symptom afterwards, and the patient was discharged cured at the end of the month. This man presented himself at the Eye Infirmary a few days ago, (February, 1827,) remaining quite well, and there does not appear any tendency to a return of the disease.

"After the operation, on making an incision across the tumour, it was found of a firm granular texture throughout; and in its centre the remains of the eye were very evident. The whole globe of the eye, with a portion of the optic nerve, were removed, as may be seen on inspecting the preparation, which is now at the Eye Infirmary.

"On maceration in spirit, the tumour became of a white colour, and shrunk to about half its original size: but still the shape of the eyeball is distinctly marked by the pigment of the choroid."—*Ibid.*

This case is interesting, as showing that some tumours of very formidable appearance, and productive of severe pain, have nothing in their nature which is malignant, and may be extirpated with success.

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#### SURGERY.

59. *Wound of the Femoral Artery successfully treated.* By M. LISFRANC.  
—M. T. aged twenty-three, sanguine temperament, excellent constitution, violent character, seized, during a fit of passion, on the 3d of June, a knife, nine inches in length, and ran it through his thigh from side to side. The blade penetrated from without inwards, about two-thirds up the thigh, and came out about an inch above the aponeurotic ring through which the femoral artery perforates the triceps muscle. The hæmorrhage which instantly came on was frightful; his strength forsook him, and he fell down on the pavement, before he could aim another blow at his heart, which he attempted. He was immediately conveyed to the Hospital de la Pitié, and placed on a bed. This was at five o'clock in the afternoon. Drs. Devilliers and Salone, who arrived a few minutes after the accident, exercised successively with M. Martinet, the élève of the hospital, strong pressure on the artery, just below Poupart's ligament. The patient was seized with vomiting, which rendered compression very difficult; the accident took place immediately after his repast. M. Lisfranc arrived at ten o'clock, and found the patient in the following state:—Constant vomiting, starting of the tendons, syncope, extreme pallor and sinking of the countenance, the wounded member was nearly double its natural size, but the colour of the skin was not changed. It was a question whether the enlargement of the limb was caused by the injection of blood into the cellular membrane, or by inflammatory tumefaction. M. Lisfranc considered it to be the latter, as he had before witnessed cases where inflammation and tumefaction came on in the course of an hour or two, contrary to the opinion of most authors; he therefore acted upon the strength of his diagnosis, and proceeded to tie the vessel. He made an incision three inches and a half in length by the side of the wound, commencing half an inch below the opening through which the artery perforates the tendon of the triceps muscles. The subcutaneous cellular tissue was double its natural thickness, but there was no sanguineous infiltration. Having exposed the sartorius muscle, which was found swelled, the operator met at its inner edge the course of the wound, near the opening of the tendon of the triceps. The tissues were of a dark colour at this point, and slightly infiltrated with blood. The sartorius

had contracted intimate adhesions with the subjacent parts, owing to the inflammation of the tissues. These adhesions were destroyed with the finger. Under the muscle, at the point where the vessel had been wounded, were found dense clots of blood. The sheath of the artery was next laid open to some extent, and the vessel was found contracted to a very small size, being quite empty. The vein, on the contrary, was very large, and its volume singularly augmented every time the patient exerted himself in vomiting. Owing to the contracted state of the artery, the wound in its coat was so much reduced that M. Lisfranc could not discover it until the pressure above was removed for an instant. When the vessel was set at liberty, the blood was immediately thrown out in a very thick column, and with great force. The operator instantly clapped his finger on the wound, and the pressure was renewed. A ligature was now passed under the vessel, which was tied above the wound. Another ligature was applied below it, but it was necessary before this could be done, to slit the tendon, through which the artery passes, to the extent of about a third of an inch. The wound caused by the operation was then closed, and its edges kept together by adhesive plaster, over which a compress was applied; then a bandage was twisted round the limb all the way from the crural arch to the toes. From eleven o'clock at night until the following morning the patient felt very severe pain in the inner ankle and instep; great tumefaction of the whole limb; no sleep. At seven o'clock, it was found necessary to slacken the bandage; the pain immediately abated. (*Gum-water; absolute abstinence.*)

June 4th. Until four o'clock, slight pains towards the extremity of the member, which was placed in the demi-flexion on its outer side. The limb was covered with a bolster, for preserving its warmth; its natural temperature never forsook it. Vomiting intermittent, and without any effort; a few minutes sleep in the day. Towards ten o'clock at night, slight delirium; pulse full and frequent; skin hot; but as the patient had lost a great quantity of blood, it was not judged proper to have recourse to bleeding. At intervals, during the night, the patient had about three hours sleep. (*Same prescription.*)—5th. He slept during the whole night; the suppuration which commenced to be established was of a good quality, and it issued in great abundance from the outer wound caused by the knife. The heat of the limb was natural. (*Gum-water; abstinence; dressings renewed twice a-day.*)

The patient was kept under a similar treatment until the 14th, when he was allowed chicken broth in addition. The wound continued to discharge very profusely for some days, but by the 17th, the discharge had nearly ceased. His diet was gradually increased from the last mentioned period; and by the 30th, he was perfectly recovered, and able to return to his occupations. The limb never lost its natural temperature. The lower ligature came away on the 13th, and the upper on the 14th.

"There is one circumstance well worthy of notice in this case, namely, the sudden manner in which the inflammation and tumefaction of the limb took place in a case of clean incised wound. We cannot help noticing also the favourable and rapid cessation of the swelling, when neither surgical nor medical means were resorted to for their reduction. All the medicine which the patient took was gum-water. Not a grain of cathartic medicine of any sort was administered; nor is there a word said about the state of the bowels."—*Lond. Med. and Surg. Journ. October, 1828.*

60. *Stricture of the Urethra cured by a Mercurial Treatment.* By Professor GRAEFE.—A man who had had gonorrhœa several times, was troubled for eleven years with stricture of the urethra, which was latterly so considerable as to produce a development of tumours along the passage, extending throughout the perinæum. He felt a constant inclination to make water, but the fluid only came drop by drop, in consequence of which the bladder was never completely emptied. The absorption of the urine had affected the constitution of the patient very much, and it communicated to the breath and perspiration a strong



urinous odour. When the patient entered the hospital, his suffering was in the extreme; the tumours had enlarged to such a degree that he had not been able to pass any urine for eight-and-forty hours. At this time he had a violent fever; the inflammation which supervened in the bladder and the scrotum had resisted blood-letting, general and local, and part of the urine had become extravasated into the surrounding cellular tissue through an opening which had formed behind the stricture. The puncture of the bladder, performed immediately, owing to the impossibility of introducing the catheter, removed the danger for the moment. The fever and the inflammatory symptoms abated under the use of appropriate internal remedies; but a considerable part of the scrotum had become gangrenous, and when the slough separated, a great quantity of urine, which had been extravasated, came away at the same time. In this state of things, and considering especially the original cause of this inveterate affection, mercurial frictions were prescribed. Under the influence of this treatment, the urethral tumours disappeared; the testicles, which were before naked, became enveloped in skin; the urinary fistulæ closed, and the patient quitted the hospital.—*Institut. de Clinique Chirurg. de Berlin.*

61. *Case of Strangulated Hernia presenting a Remarkable Peculiarity.*—Dr. EHERMANN, of Strasbourg, relates in the *Repertoire de Anatomie, Vol. V.* the case of a labourer, aged forty-seven years, of a robust constitution, who, some days after having entered the clinic of the faculty, to be treated for a whitlow, was attacked suddenly, without any known cause, with all the symptoms of strangulated inguinal hernia. The stricture was not produced, however, by the external inguinal ring; for this permitted the introduction of two fingers, and the portion of tumour behind it was distinctly felt. Three days being spent in fruitless attempts at relief, it was determined to operate; but the precise seat of the strangulation was still doubtful: the external inguinal ring was free, the hernial tumour had the direction of the canal, and it could not be ascertained if it extended very far into the abdominal cavity; nevertheless, as the hernia was circumscribed at the exterior, and it could not be reduced, Dr. Ehermann supposed that the stricture existed at the internal opening of the inguinal canal. An incision of three inches laid bare the aponeurosis of the external oblique, about an inch above the ring. On removing the fascia of condensed cellular tissue, the hernial sac presented, which was opened, some reddish serum flowed out, and the fold of intestine appeared of a livid colour, bluish, and inflamed throughout. On introducing the finger into the bottom of the wound at the superior angle, the supposed stricture at the internal opening of the inguinal canal, was immediately recognised. The first finger of the left hand being placed on the intestine, and introduced to the seat of the stricture, served as a guide to Cooper's probe-pointed bistoury: immediately on dividing the stricture above and outwards, the finger could be introduced into the cavity of the abdomen, and the fold of intestine was very easily reduced. The wound was dressed with adhesive plasters, lint, compresses, and bandages, and in less than a month the patient was dismissed cured.

Dr. Dorsey, in his *Elements of Surgery*, relates a case somewhat similar; but in it the stricture was produced by the neck of an old hernial sac, which had been a long time returned into the abdomen.

62. *Cases of Laryngitis, in which Bronchotomy was successfully performed.* By Dr. COOPER, of Glasgow.—“*Case I.* A weaver, fifty years of age, was admitted on the 7th of November, 1827, with dyspnœa, and difficult deglutition. The voice was much impaired—the air during inspiration produced in its passage through the upper part of the larynx, a loud, moving noise, and, at times, a ringing sound—occasional paroxysms of violent cough, with copious but difficult expectoration of tough and yellow sputum—parts in front and at the side of the thyroid cartilage swollen and tender upon pressure, the swelling extending in a less degree towards the cricoid cartilage and os hyoides—no discolora-

tion of the skin—nothing unusual in the fauces or the epiglottis—pulse 120, feeble, and thready—skin cold—aspect pale and haggard—strength much reduced. These were the symptoms, and it seemed that six weeks before, without obvious cause, the complaint began by swelling around the thyroid cartilage, followed by throbbing pain in the part. In the course of seven days the pain was relieved, but difficulty of breathing and swallowing commenced, and during the last eight days had been urgent.

“Leeches, and after them a blister, were immediately applied over the larynx, and a grain of calomel and the same amount of opium ordered to be taken every third hour. At nine, P. M. he was suddenly seized with dyspnœa so severe as to threaten immediate suffocation, and this was still so urgent when Dr. C. arrived, that he forthwith proceeded to open the windpipe. On account of the swelling above the larynx, the opening was made below the cricoid cartilage, which procured instantaneous relief for the dyspnœa. The wound was kept open by a bit of curved wire. No further difficulty of breathing took place, excepting that once a severe fit of coughing was caused by a little milk escaping through the wound. On another occasion, also, accidental derangement of the wire produced a slight paroxysm, but further than these, not the slightest inconvenience was felt after the operation. After a few weeks the wire was exchanged for a curved silver tube, about two and a half inches long, and one fourth of an inch in diameter, provided with two small rings, through which a piece of tape was passed, and tied round the neck, to retain the tube in situ.

“On the supposition that the contraction of the cavity of the larynx depended on thickening of its lining membrane, a mercurial course was prescribed, but apparently without benefit; for, although the patient continued to breathe easily so long as the wound was kept open, yet all attempts to make him breathe through the mouth alone, proved ineffectual. On various occasions the wound was closed with adhesive plaster, to ascertain if any improvement had taken place, but it was invariably found necessary at the end of a few minutes to open the wound and replace the tube, on account of increasing dyspnœa. At one time I entertained hopes of being able to dilate the contracted larynx, by bougies passed upwards through it from the wound; but the extreme irritability of the parts rendered this proposal impracticable. The introduction of even a probe through the wound into the larynx, was found to excite such a paroxysm of cough, that it was absolutely necessary to desist.”

“After remaining in the hospital above five months, the patient was dismissed, suffering no inconvenience except the necessity of breathing through the tube, a circumstance which habit had rendered very tolerable. By stopping up the tube with the point of his finger, he could speak in a hoarse but audible tone. In the month of August last he appeared at the infirmary, and was perfectly free from all complaint.

*Case II.*—“This was a tobacco-pipe maker, aged twenty-eight, who was seen by Dr. Couper, thirteen days after the commencement of the laryngeal inflammation. He had been bled pretty freely at different times, blistered, and treated with diaphoretic medicines, but still, though at times apparently relieved, the disease had proceeded on its march. When examined by Dr. C. he was just recovering from a fit of alarming orthopnœa, and presented these symptoms. Incapability of assuming the horizontal posture—inspiration laborious and wheezing—fauces red and swollen—epiglottis enlarged, tense, and shaped like a glans penis during erection—uneasiness decidedly referred to the larynx.

“Laryngotomy was immediately agreed upon. In making the incision through the integuments, a small artery was cut, and bled very freely. At the same instant the dyspnœa became greatly increased; the patient’s face became livid, his limbs quivered, and his urine was ejected involuntarily. Without waiting to secure the artery, I immediately perforated the thyro-cricoid membrane, and the transition from the state now described to easy respiration was nearly instantaneous. The patient’s body being inclined forward, no inconvenience was felt from the bleeding, which was speedily stopped by the pressure of the wire employed to dilate the aperture. From this time he continued to

breathe easily, partly by the wound and partly by the mouth, and swallowed without difficulty.'

"Four days after the operation the wire was withdrawn, and on the 15th the wound was so very nearly healed that even during coughing no air escaped by it. Nine days after this, the patient had a rigor, followed by urgent orthopnœa, and a little pain and swelling of the right side of the larynx. After vainly employing a full dose of laudanum and antimonial wine, without relief, the larynx was opened a second time. In the course of ten days, the wire was changed for a silver tube which was kept in the wound for upwards of a month, and then withdrawn, shortly after which the wound was healed. A few days after this he was discharged, affected with only a glandular swelling on the left side of the neck, which soon disappeared on his leaving the hospital.

"Both of these cases appear important; the former as an example of contraction of the larynx produced by chronic inflammation, and the latter as an instance of the same effect arising from acute œdematous laryngitis. The important fact, that the dyspnœa in cases of laryngeal disease is liable to sudden and dangerous exacerbations, is well illustrated by both. Such paroxysms may cease after the irritability of the parts is exhausted, but they will certainly recur again and again, until suffocation is produced, unless an artificial opening is made into the windpipe, to allow a free access of air to the lungs. When the necessity for it ceases, the aperture can be easily healed up; and even should the contraction of the larynx prove permanent, as in the case of Limpitlaw, it must be allowed that the inconvenience arising from breathing through a tube inserted into the windpipe during the remainder of life, is small, when compared with loss of a limb, to which few refuse to submit as a mean of prolonging life."—*Med. Chir. Rev. Jan. 1829. from the Glasgow Medical Journal, No. IV.*

63. *Treatment of Strictures of the Urethra.*—The mode of curing strictures of the urethra by confining a *large* bougie at the anterior part of the obstruction, is still employed with undeviating success in the wards of M. Dupuytren and of M. Breschet at the Hôtel Dieu. The mere contact, accurately preserved for eight or ten days, often enables a catheter of the largest size to pass freely where the smallest bougie could not previously penetrate.

"The bougies thus introduced are provided with four very narrow tapes or strings, whereby they are attached to a T-bandage, surrounding the waist and under the scrotum. In their passage they are coiled, at equidistant points, round a ring which is placed over the body of the penis."—*Lond. Med. and Phys. Journ. Jan. 1829.*

64. *Fatal error in the diagnosis of a tumour.*—A peasant boy received a blow on the left temple; a tumour was developed which was supposed to be encysted, and extirpated. The excision was immediately followed by profuse hæmorrhage, which was arrested by compression; and Dr. KRIMER sent for, who found the patient in convulsions, which soon terminated in death. The extirpated tumour was an aneurismal sac communicating with the middle meningeal artery, by an opening situated between the squamous border of the temporal and the corresponding portion of the parietal bone. The middle meningeal artery was of the size of a finger fifteen lines lower than the opening. A depression in the brain under the aneurismal dilatation existed, which contained one and a half ounces of bright blood.—*Journ. für Chirurg. und Augen-heilkunde, Vol. X.*

65. *On the removal of loose substances from the knee joint.* By CHARLES AVERILL, Esq.—"When it is ascertained that one or more of these substances are lying loose in the cavity of the knee-joint, we have the choice of two modes of practice, which may be called the palliative and the curative. The former is the method proposed by the late Mr. Hey, of wearing a bandage, or laced kneecap, so as to confine the substances in one spot, and, thereby, prevent its giv-



ing pain, by getting between the extremities of the bones forming the joint. This practice, I should imagine, is not applicable to those cases in which there are two or more substances present; especially if they differ considerably in size, and if the patient's occupation subject him to hard labour or severe exertion. In such cases, relief may be afforded by the operation of removing the substances; but this, from its necessarily laying open the joint, as well as from its having been, in some instances, unsuccessfully attempted, has always been considered a serious undertaking.

"The only difficulty that, as far as I am informed, has been found in accomplishing the operation, even when there are two or more substances present, is to fix them, whilst the operator cuts into the joint, so that he may extract them readily, after the incision is made. This difficulty, which is owing to the polished surfaces of the loose bodies, and the lubricating nature of the synovia favouring their slippery passage from one part of the joint to another, obliged the surgeon to relinquish the operation, even after he had cut into the joint, in a case of this kind, which was lately related to me by Mr. Thomas Christie, an apprentice of Doctor Ballingall, Surgeon to the Royal Infirmary, in Edinburgh. In this case, the operation had been twice attempted, by different surgeons, without success; and the patient afterwards went into the Edinburgh Infirmary; where the substance was removed by Mr. Allan.

"Aware of the above facts, I was induced to consider how I might obviate the difficulties I have stated, and have been gratified to find that I could do so by very simple means. When the patient, whose case is here introduced, came under my care, I procured an iron ring, represented in the plate, and found, upon trial, that the loose substances in his knee-joint were to be easily fixed by it, so securely, in one spot, as could leave no doubt in my mind of their being easily extracted. The result will best appear in my notes of the case, which are as follows.

"George Fluck, aged 30, by trade a gardener and nurseryman, was admitted to the Cheltenham Casualty Hospital, August 16, 1825, when he gave the following account of himself.

"He had, for several years, thought there was a degree of weakness in his knees, particularly when he was carrying any heavy weight. Between two and three months since, after he had been kneeling for some time in the garden, at work, he was attacked with considerable inflammation and swelling in the left knee, for which he used an embrocation, and when the swelling went down, he found there was a moveable substance in the joint. Shortly after, he discovered a second. These, at times, caused excruciating pain, more particularly when he was walking down hill, or coming down stairs, so as to oblige him to sit down till the pain had subsided.

"He had worn a bandage, by means of which he could fix the larger substance at the upper and outer part of the joint; but the smaller one could not be retained in any one place, and it was this, which, from its motion, and from its getting between the ends of the bones, gave him pain.

"At the time of his admission, both substances could be readily felt, and moved to different parts of the joint; one appeared to be about the size of a marble, flattened; the other considerably smaller.

"He was recommended to submit to the operation of having them removed, to which he consented; and was therefore directed, by way of preparation, to take some pills of calomel and extract of colocynth, and some aperient medicine by day, for two or three days, and to eat no meat.

"On the 19th, the operation was performed in the following manner.

"Both the substances being pushed to the upper and outer side of the joint, and the integuments drawn tightly over them towards one side,\* while the knee was kept straightened; the substances were fixed by means of the ring, which

\* "This was done to prevent the wound in the integuments being parallel to that in the capsular ligament."

is held with my left hand, firmly pressed against the side of the outer condyle of the femur, thus rendering their escape back into the joint impossible.

"I then, with a common scalpel, made an incision, within the ring, through the integuments and capsular ligament, from above, downwards into the joint; when the larger substance immediately fell out on the floor, and, with my finger, I tilted out the smaller one.

"The operation was performed in less than a minute, and only about a drachm of synovia escaped. There was no bleeding of consequence; the lips of the wound were brought together by adhesive plaster, a bandage applied, and a long splint was fixed on the outside of the limb, to prevent the knee being bent. He was directed to keep quiet in bed, and to take a saline draught every three hours.

"August 20.—He has had a good night, and is free from pain.

"22.—The wound dressed, looking very healthy.

"28.—Sat up for an hour or two.

"Sept. 3.—Discharged quite well.

"In conclusion, I may be allowed to ask, whether the evils so much dreaded in the operation of removing loose cartilages from the joints, may not, in all probability, have arisen from the excessive escape of synovia, and the irritation produced by unsuccessful attempts to squeeze out those substances at a wound made comparatively upon speculation; and whether, if they can be always certainly and securely fixed, by the simple means I have employed, the operation be not thereby rendered sufficiently safe to authorize us to recommend it with confidence; at all events, where the bandage and knee-cap have failed to afford relief."—*Midland Reporter*, No. I.

66. *Lithotrity*.—"MR. ZANABI PECCHIOLI, an eminent young surgeon, charged by the Grand Duke of Tuscany to observe the actual state of surgery in various countries, has made a great improvement on, or rather he has added a new and important principle to, the lithontriptic instruments invented by Messrs. Leroy d'Etoile, Civiale, Amusat, Hourteloupe, &c. &c. We have had a recent opportunity of examining Mr. Pecchioli's instrument, and seeing him work it on different calculi—not, of course, in the living body. We would say that its superiority over the instruments of the gentlemen above-named, is threefold. In the first place, it combines the principles of each of the others, the drills and other parts of their machinery being rendered completely available to Mr. P.'s apparatus. In the second place, the spring, or ressort, by which the drill or perforator is made to bear on the calculus, and which cannot, in the other instruments, be made to vary in force, is superseded by the construction of the pulley, which enables the operator to modify, vary, augment, or diminish, at pleasure, the force used—and that by his own hand. This we conceive to be a very important improvement. But the third modification is the most important of all. The perforator or drill, in Mr. P.'s lithontripteur, can, at any period of the operation, be converted into a kind of trephine, varying in the diameter of its circular movements from the smallest circle up to one of eighteen lines in diameter, at the operator's will—and thus becoming capable of grinding down the calculus by a series of gyrations equal in extent to the grasp of the pincers or tenacula, instead of boring holes, and shifting the instrument for each perforation. By this operation, a considerable portion of stone may be ground down by a single sitting; and the danger of large and irregular fragments being scattered about in the bladder, when the calculus is broken after many perforations, according to the methods of Leroy d'Etoile and Civiale is avoided.

"Sir Astley Cooper, Mr. Travers, Mr. Key, and many other distinguished surgeons, have compared Mr. Pecchioli's apparatus with that of M. Civiale's; and, without vouching for the general success of the lithontriptic process, they have no hesitation in acknowledging the great ingenuity of Mr. P.'s instruments.

"P. S. When Sir Astley Cooper was in Paris last month, he went to see M.

Civiale operate with the lithontripteur. The subject was not one of the best for any operation. M. Civiale threw in half a pint of tepid water—introduced the lithontripteur with the greatest ease, seized the stone, drilled it, and then crushed it, all in the space of about seven or eight minutes. The operation over, the man discharged the water which had been injected, quite turbid with the sawings of the stone, and when poured off, disclosing numerous fragments that had come away with the first evacuation of the bladder after the operation. Sir Astley was quite astonished at the facility with which the whole was performed by M. Civiale. We apprehend that this operation *must* become popular in the hands of a *few* expert surgeons; but we do not suppose it will ever become general among surgeons at large.”—*Med. Chirurg. Rev. Jan. 1829.*

67. *Hydrocele*.—Professor GRAEFE cures the congenital hydrocele, and that occurring in children a year old, by the application of the aqueous solution of hydrochlorate of ammonia with vinegar of squills. *Rap. de l'Inst. de Clin. Chirurg. et Ophth. de l'Univ. de Berlin, 1827.*

68. *White Swelling successfully treated by Frictions of Iodine*. By Dr. LUGOL.—The use of iodine in scrofulous tumours is strongly recommended by the most eminent French surgeons. M. BRESCHET, in his lectures, speaks of it in the highest terms. The same treatment is pursued with advantage at the Hôpital St. Louis, from the records of which a recent cure of white swelling and tumour of the jaw may be cited as a proof of its efficacy.

The patient had white swelling, with several fistulous ulcers, on the knee: the leg was bent on the thigh, and utterly useless. He had also a large tubercular tumour on the right side of the face, which seems to have its origin over the maxillary joint. The swelling was such that the man could scarcely open his mouth, and the flat edge of a penny-piece was the largest substance he could introduce between his teeth. These tumours have entirely disappeared under the use of iodine frictions.—*Journ. de Hôpitaux.*

69. *Aneurism of the Carotid cured by the Method of Valsalva*.—In Vol. II. p. 451, we noticed a case of aneurism of the crural artery cured by M. LARREX by the method of Valsalva, conjointly with the application of ice to the tumour; a case of carotid aneurism is related in *Hecker's Annals*, for May 1828, which was cured by similar treatment. In the latter case, the aneurism was situated on the left side of the neck, and extended from the thyroid body to the clavicle. The tumour was soft and larger than a pullet's egg; there was a strong pulsation in it, and the colour of the skin covering it was natural. It was cured by the continued use from the autumn of 1820 to the spring of 1822, of a rigid diet, consisting of weak soups, bread, vegetables, and of acidulated drinks; aided by rest, repeated bleedings, the use of digitalis, of laurel water, and the application of pounded ice. The patient could not support compression of the tumour; he suffered from time to time angina and difficulty of swallowing. For more than two years the patient has enjoyed perfect health.

70. *Case of Aneurismal Condition of the Posterior Auricular and Temporal Arteries, successfully treated by an Operation*. By JAMES SIME, Esq.—Mrs. T. aged fifty, applied to Mr. S. on account of a tumour about the size of a large gooseberry, which was situated behind the right ear, over the mastoid process. It had been first noticed about ten years ago, and had very gradually increased until of late, when its progress was more rapid. Pressure had been recommended by different surgeons, and tried without relief. This tumour, when seen by Mr. S. yielded readily to the fingers, and in its place could then be felt a considerable depression; so soon, however, as the pressure was removed, it immediately filled again, and if the finger was gently applied while this took place, a jet of blood could be felt issuing from the bottom of the tumour, and the patient heard such a whizzing noise, that she could hardly be persuaded



the bystanders also did not perceive it. Below the tumour, the posterior auricular artery could be felt greatly enlarged, and throbbing with violence; when this vessel was compressed, the tumour became flaccid. The patient complained of pain and noise in the swelling, the latter being often so distracting as to deprive her of sleep. Conceiving it to be an aneurism of the posterior auris, Mr. S. with the assistance of Dr. Ballingall, proposed to tie the vessel; but on shaving the hair from the side of the head, it was found that the tumour was not so circumscribed as it appeared to be, but that not only all the branches of the posterior auris were dilated, but also the posterior and middle branches of the temporal, all of which were throbbing obviously, though not very forcibly.

It was now thought that it would be necessary to tie the carotid, but before doing so, it was discovered that when the posterior auris was compressed, the dilatation disappeared; it was therefore determined to tie the latter vessel as originally proposed. It was accordingly exposed a little below where it entered the tumour, which was not very easy as its course was perpendicular to the surface, and it was included in a single silk ligature. When the ligature was drawn, the tumour became flaccid, and the dilated vessels disappeared. The edges of the wound were kept together with two stitches. Every thing went on well for a week, excepting a slight attack of erysipelas.

On the eighth day after the operation, while Mr. S. happened to press on the tumour, a slender stream of arterial blood trickled away from the side of the ligature. As it soon ceased he merely applied a compress over the wound. The hæmorrhage recurred twice or thrice in the twenty-four hours on the following days, but as it never exceeded an ounce or two he concluded that it came from the vessel above the ligature, and therefore contented himself with using superficial pressure, not in the expectation of arresting the discharge of blood,\* but in the fear of disturbing, by more efficient measures, the process of obliteration going on below the ligature, which would have been attended with more serious consequences.

On the twelfth day, conceiving that the ligature must have done its duty, Mr. S. examined the wound, and found in the seat of the ligature a small pulsating bag, from a crevice in the centre of which the blood escaped. Having detached with his nail this little false aneurism, and along with it the ligature which was inclosed, he ascertained that the hæmorrhage did proceed from the orifice of the vessel next the tumour. He then applied some small pieces of amadou supported by a graduated compress.

Every thing went on well afterwards. The wound was dressed at the end of three days, when it was suppurating most satisfactorily, and in the course of a short time it cicatrized.

For some weeks after the operation the tumour remained small and flaccid, but when the patient resumed her ordinary diet and exercise, it began to resume its former condition. It was moderately tense; and though no throbbing in it could be felt by the finger, Mrs. T. complained of the noise and pain which had distressed her previously, in a degree comparatively slight, but sufficient to disturb her repose. No appearance of the varicose dilatation of the artery could be perceived.

Finding that the uneasy symptoms continued to increase, and being anxious to take advantage of the command which had been obtained for the present over the disease by obstructing the principal supply of blood, Mr. S. determined to take an effectual step for the patient's relief.

"On the 29th of October, assisted by Professor Ballingall, I cut directly through the long direction of the tumour, which then showed itself to be composed of large irregular cells, invested by a firm capsule. While Dr. B. compressed

\* "It is highly important for surgeons to recollect that pressure is of little avail in the stopping of hæmorrhage unless it is applied directly to the bleeding vessel. If this truth were kept in mind we should not so often hear of the humeral artery being tied, since I will venture to affirm, that there is no bleeding from injury of the hand, and I will add of the foot, which cannot be commanded by local pressure. But the pressure must be applied to the bottom of the wound, and if the orifice is not wide enough to admit of this it ought to be dilated."

above and below the tumour, I dissected it out, and then attempted to tie the vessels, but finding this very difficult, I adopted the suggestion of Dr. B. and included them in ligatures by means of a small curved needle. The ligature being drawn, the hæmorrhage ceased. I then filled the wound with dry caddis, and applied a firm bandage about the head. The patient did not experience the smallest inconvenience from this operation, excepting the pain immediately attending it. The ligatures separated in about a fortnight, and the wound is now completely healed."

Three other cases of a similar disease are related, one by Pelletan, Clinique Chirurgicale, Tom. II.; another by Wardrop, and a third by Dr. MacLachlan, Glasgow Medical Journal, No. 2. In all these cases the operation was unsuccessful.—*Ed. Med. and Surg. Journ. Jan. 1829.*

71. *Hernia, Strangulated at the Superior Internal Orifice of the Inguinal Canal.*—Dr. OUVIARD relates in his *Méditations sur la Chirurgie Pratique*, three cases of this description, in which he operated with success, a fourth in which the operation was unsuccessful, and he also gives an account of the post mortem examination at which he assisted, of a fifth patient, who died three days after being operated upon. Dissection showed that the aponeurosis of the external oblique had been freely divided, but there was a stricture towards the superior extremity of the inguinal canal, which had not been divided, and which prevented the return of the intestine into the abdomen; the fold of intestine had been pushed between the peritoneum and abdominal muscles. The peritoneum was separated for about two inches, and formed a sac in which the intestine was lodged, and to which it had attracted adhesions.

72. *Treatment of Fractures of the Inferior Extremities by Continued Extension.*—M. JOSSE, surgeon in chief of the Hôtel-Dieu of Amiens, in a memoir published in the *Repertoire d'Anatomie*, Vol. V. after presenting some general observations on fractures of the limbs, and the evils which result from the means hitherto employed in reducing them, proposes a new method, which consists in placing, with the greatest care, the fractured member in its natural direction, without attempting by any force to place the fragments in apposition; for he says that there is a great difference between supporting a part, and pulling at it. In the first case, nature permits herself to be conducted, in the second she revolts; and as long as a struggle is made between the parts of a fractured member and the apparatus with which it is treated, the latter will be overcome and the limb shortened. He is contented then to support the parts and prevent their being displaced, by an eighteen-tailed bandage; he next subjects the limb to continued extension, and by proper attention, in two or three days, even in the severest cases, he always obtains a reduction and perfect coaptation of the fractured extremities. This continued extension is kept up by an apparatus which M. Josse has invented, but which is rather complex, and we shall not therefore describe it: the object may be accomplished in various ways, which will readily suggest themselves.

73. *Extirpation of a Wen.*—M. LISFRANC has recently extirpated a very large wen from a negress, situated above the clavicle, and having prolongations under this bone. The external jugular vein, which passed through the whole vertical diameter of the tumour, was dissected and preserved; the subclavian artery and vein were laid bare; the pleura was visible at the bottom of the wound. The patient recovered without any unfavourable occurrence.—*Journal Générale de Médecine, Jan. 1829.*

74. *Reduction of a Luxation of five months standing.*—M. LISFRANC has succeeded in reducing a luxation of the head of the humerus forwards, of five months standing. To avoid the accidents that have lately occurred from attempts at reducing old luxations, M. L. commenced by making at first slight extension, and gradually increased it.—*Ibid.*

75. *Aneurism by Anastomosis, successfully treated by tying the Carotid.*—Dr. ARENDT, of St. Petersburg, has successfully treated a case of aneurism by anastomosis on the right side of the head, by applying a ligature to the right carotid artery.

76. *Aneurism of the Right Primitive Carotid, successfully treated.*—There is an account in the *Annali Universali di Med.* for September, 1828, of a case of aneurism of the right primitive carotid, successfully treated by Dr. A. MOLINA, of Pavia, by means of the ligature. The operation was performed in the manner recommended by Professor Scarpa.

77. *Amputation without applying Ligatures to the Vessels.*—In Vol. I. p. 462, we gave an account of the method of amputating by Dr. Koch, of Munich, who has “not tied a single artery in the various amputations which he has performed for the last twenty years.”

Professor Graefe relates in his *Rapp. Annuel de l'Institut. Ophthalm. Med. Chirurg. de Berlin*, that during a late visit to Munich, Dr. Koch permitted his son, in order to dissipate Dr. Graefe's doubts, to amputate a thigh. It was found necessary, however, to apply a ligature to the crural artery. The method of Dr. Koch, will not, of course, answer in all cases.

78. *Needle in the Larynx, removed by Laryngotomy.* By M. BLANDIN.—A man, aged twenty-five, whilst irritating his nostril with a needle, carelessly let go his hold, when the needle passed into the nostril and thence into the pharynx. The needle was armed with a large thread, which entered with it, and the whole disappeared. Much irritation and cough being excited, the thread was thrown out of the mouth, and the patient then endeavoured, but in vain, to extract the needle by pulling at the thread: every attempt caused acute pain. The respiration and voice becoming affected, and all efforts at extraction being vain, the patient entered the Hopital Beaujon, June 18th, 1828. At this period the pains had considerably increased, the slightest efforts at deglutition augmented all the symptoms, so that all movement of the pharynx was impossible; the voice was nearly lost; he had a very unusual and remarkable hoarseness, a frequent cough, and every effort at coughing produced spasms of the muscles of the neck. The soft parts covering the larynx were much tumefied, the skin red and painful. The house pupil, having in vain endeavoured to extract the needle by means of the thread, sent for the surgeon, M. Blandin. When M. Blandin arrived, he found the patient still in the state already described, and in an effort at deglutition the thread had entered the pharynx. Not being able to seize the thread, and thus to ascertain positively whether the needle was in the pharynx or larynx, and the pain of respiration being still supportable, it was determined to trust the case to antiphlogistics, general and local, which were employed with some success. But on the evening of the 21st the thread was again ejected, by means of which Dr. Blandin ascertained that the needle had entered the superior aperture of the larynx on the left of the epiglottis. On the 22d, the symptoms became much aggravated, and it was determined to perform laryngotomy. This was executed by making a cautious dissection through the indurated and swollen parts, in front of the larynx, then carefully puncturing the crico-thyroid membrane, and afterwards dividing, by means of a director and bistoury, the thyroid cartilage, through its whole length, on the median line. The respiration was now much relieved, and an attempt was made to discover and remove the needle by means of forceps; but they produced so great an irritation as to induce the operator to desist. The wound was lightly dressed by means of a perforated compress covered with simple cerate, and the patient put to bed. The night was passed comfortably, and the next day the needle was found fixed in the compress covering the wound. The wound gradually healed, so that by the beginning of September only a small fistula remained, but the voice was hoarse. There was some pain in the larynx, and other indi-



cations of chronic inflammation, for which leeches, a seton to the back of the neck, &c. were prescribed, and afterwards mercurial frictions on the sides of the larynx; and caustic to the fistula. On the 30th of September the fistula was closed, and the voice had acquired more force.—*Journal Hebdomadaire de Médecine, No. I.*

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### MIDWIFERY.

79. *Injection of vinegar and water into the umbilical vein in cases of Uterine Hæmorrhage, depending upon Retention of the Placenta.*—The evidence in favour of this new remedial measure, which we have already made our readers acquainted with, is increasing. Dr. JEMINA, relates in the *Repertorio di Med. di Torino*, for August, 1828, three cases of uterine hæmorrhage depending on partial attachment of the placenta, in which he succeeded in effecting its detachment by injecting the umbilical vein with cold water, in which a little vinegar was mixed.

Dr. F. O. DOUCET, of New York, also relates a successful case in the *New York Medical and Physical Journal* for December, 1828.

80. *Mr. Mantel's Report of Midwifery.*—In the midwifery practice of a healthy country town, the number of cases being 2510; there were 4 arm presentations, or 1 in 600; 8 in which turning was required, or 1 in 300; 6 in which the forceps were employed, or 1 in 400; 3 cases of embryotomy, or 1 in 800; 6 cases of puerperal convulsions, or 1 in 400; 2 cases were fatal.—*Lond. Med. Gaz.*

81. *Case of Difficult Labour in consequence of the Enlarged State of the Kidneys of the Fœtus.*—In the first number of *Gemeinsame deutsche Zeitschrift für Geburtskunde*, a case of this kind is related by Professor OSIANDER of Göttingen. The kidneys were as large as in the adult, and greatly distended the abdomen. The other viscera of this cavity were very small.

82. *Absorption by the Uterus.*—Dr. F. C. NÆGELE, Professor of Midwifery in the University of Heidelberg has published in *Froriep's Notizen* some cases which seem to show that the placenta when retained after the delivery of the child is sometimes absorbed by the uterus. In 1802, Dr. N. was called to a lady, who in consequence probably of fatigue, “was brought to bed between the twenty-fourth and twenty-sixth week of her pregnancy; the child lived several hours after birth; little hæmorrhage followed, but the placenta did not come away. The cord, which was very thin, had been torn off at its insertion, as far as could be judged from the length of it. The midwife, who was an experienced as well as a highly respectable person, informed me that it had occurred as she passed her finger along the cord to ascertain whether the after-birth were already separated; and assured me that she had not exerted too much force in endeavouring to extract it, in which account the bystanders also agreed. The lady and her friends were under considerable alarm on account of the placenta not coming away; and the midwife, who suffered not less anxiety for her patient, scarcely quitted the bedside for the first nine days, and even passed the night in her room; so that the case was watched with the greatest attention. The lochia, which was sparing and devoid of fetor, and with scarcely any coagula of blood, lasted only four days. A slight attack of fever was experienced twenty-four hours after delivery, unattended, however, with any pain of the abdomen. The breasts did not swell, the menstruation returned in eleven weeks, and in about three years after she bore a child at the full period of pregnancy.

“In another case, in 1811, where abortion had occurred between the fourteenth and fifteenth week, from no assignable cause, and with scarcely any hæ-

morrhage, and which I had an opportunity of observing with the greatest accuracy, the secundines did not come away; a febrile attack came on upon the third day, which soon disappeared; no local pain, no discharge from the parts of generation; the menses returned after nine weeks, and no traces of the placenta, &c. ever appeared.

“An experienced accoucheur of this place, (Dr. Götzenberger,) has had the opportunity of attentively observing two cases of this kind, and assured me positively that he was perfectly convinced that no trace of the placenta had been detected, either in a solid or in a partly dissolved state.”

This circumstance having interested Dr. N. considerably, he has, he says, endeavoured of late years to excite the attention of several of his professional friends, and at various times has received from them accounts confirming the truth of his observations, “both in cases of premature labour, where the placenta had been retained, as also of labour at the full term of pregnancy, where large portions of it had remained attached, where no traces of it in either in a solid or half-dissolved form had come away, and this had occurred without any injurious consequences.”

Professor Sebastian, of Heidelberg, having lately returned from a journey to Holland, has communicated to Dr. N. a most interesting case which he received from the mouth of Dr. G. Salmon, of Leyden, where, after labour at the full period of pregnancy, the whole placenta had been absorbed, and the case terminated successfully.

I am far from denying, says Dr. N. the liability to deception in cases of this sort, and am well aware how extremely difficult it is to form a correct opinion upon them. A comparison of this with processes of a similar nature, more especially with those that are observed to take place in cases of extra-uterine pregnancy, and also in animals, and a more elaborate discussion of the subject in a practical point of view, which has engaged my attention for some time, has made me very anxious to avail myself of the experience of others who may enjoy more extensive means for observation than myself.

83. *Table of Labours in the Clinic of Heidelberg, from the 1st of January, 1825, to the 31st of December, 1826.* By Professor NÆGELE.—In this interval of two years there were 412 deliveries, of which 6 were twin cases, and 3 abortions. Omitting these last, there were born 415 children, of whom 199 were boys, and 216 girls; of these 415, 398 were head, 15 breech or feet, 1 arm, and 1 shoulder presentations.

Of the head presentations,—394 presented the cranium, (of which 378 were natural,) and 4 the face. In 16 cases the position was not accurately determined. The cranium presented, in 253 cases, the right parietal, (as the part most advanced,) the posterior fontanelle being turned more or less to the left and anterior part of the pelvis; and in 125 cases, the left parietal, the posterior fontanelle being in a direction opposed to the former. The ordinary turns of the head occurred in all these cases, except one, in which the left frontal appeared at the outlet of the pelvis, and the face was turned up behind the pubis. The child being small, delivery was prompt. In the four face presentations, the forehead was on the left side in 2 cases, and on the right in the remaining 2.

Of the 418 births, 319 were finished by the natural powers, and 19 with artificial assistance, viz. 15 by the application of the forceps, 3 by turning, and 1 by perforating the cranium.

Of the 412 mothers, 410 left the clinic in good health; two died: 387 children were born alive, and 31 dead; of these last, 16 were dead before the commencement of labour. There were 19 premature labours, including the three abortions. The labours with the face presenting were fortunate. The children lived with one exception, owing to a prolapsus of the cord. The breech cases gave 11 living children, 1 was born with some signs of life, and 3 were dead; 2 of whom manifested signs of putrefaction, and the third was premature. In the forceps cases, all the mothers and 13 children survived; 2 children were lost

by the prolapsus of the cord. Turning was indicated in 2 cases by oblique or transverse positions of the fœtus, with presentation of the shoulder or arm; the infants were dead. In the third case turning was required for a prolapsus of the cord; the infant was born in a state of asphyxia but was soon recovered. Perforation of the head was made where the antero-posterior diameter of the pelvis was only 3 inches. Labour had lasted several days. Rupture of the uterus occurred, the infant, which was dead, was drawn down by the feet without difficulty until the head presented, which was then opened, and the child was extracted. The mother died from abdominal inflammation.

Premature labour was excited in one case of narrow pelvis. The infant was born alive, and the mother did well. There were 4 cases of uterine hæmorrhage; 3 before the exclusion of the placenta, and one 24 hours after. They were successfully treated by the tincture of cinnamon given internally, and by cold affusions on the abdomen. In one case, the placenta was artificially separated.—*Revue Médicale*, Dec. 1828.

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84. *Case of Retroversion of the Womb.* By J. P. OUVREARD.—Madame Cady, of Longuenée, near Chalonnès, aged fifty-four years, sent for Dr. O. on the 24th of July, 1812. She had been suffering for twenty-four hours, during which time she had passed neither urine nor feces. The bladder was enormously distended with urine. The most pressing inclinations led to incessant efforts either to urinate or go to stool; she complained at the same time of violent colic, with severe pains in the loins and thighs; her body was covered with a cold sweat, and her pulse was small and intermittent. After having ascertained the retention of urine, Dr. O. hastened to introduce the catheter, which, however, he was not able to do without some difficulty. Nevertheless, the bladder emptied itself completely, when all the alarming symptoms suddenly dispersed, except those about the rectum, which still prevented the patient from going to stool. Suspecting from this circumstance that the cause of this double accident was situated in the vagina, he examined this organ, and found the mucous membrane, which lines it posteriorly, forming at its orifice a thick cushion. The fundus of the uterus was situated below, and on the right, supported upon the hollow of the sacrum; its neck lay under the arch of the pubis, where it pressed strongly upon the urethra, whilst the summit of the fundus compressed the rectum against the sacro-iliac symphysis. Thus the neck was higher than the fundus; and, whilst from its situation in the axis of the perineal strait, the posterior face of the uterus became the inferior, the anterior became the superior. By introducing two fingers into the vagina, Dr. O. was enabled to push the fundus of the uterus upwards, and at the same time bring down the neck of that organ, which resumed its natural position. After having mentioned the age of the patient, it would be superfluous to add, that the uterus was empty, and contained no foreign body. Madame Cady informed Dr. O. that the affection manifested itself suddenly, in consequence of efforts made by her to lift a weight.—*Mémoires sur la Chirurgie Pratique*.

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85. *Case of Premature Birth, attended with some uncommon Circumstances.* By J. J. CRIBB, Esq. Surgeon.—“Mrs. R. aged about 40, was taken with labour November 2d, 1827. She had been married fifteen or sixteen years, and has several living children, born in the course of a few years immediately succeeding her marriage. Her three or four pregnancies preceding the present had terminated in abortion, about the middle of the period of gestation. In the present instance she told me that she menstruated last on Easter Sunday, which was on the 15th of April; consequently, even if she had become pregnant immediately after that period, she could not be advanced more than twenty-eight or twenty-nine weeks. The labour proceeded, and in a short time the ovum was expelled entire, the membranes, not having been ruptured, still enclosing the fœtus floating in the liquor amnii. On breaking them, the child was found alive, and it appeared perfectly formed, but from its diminutive size and prema-



ture birth, its life, it was expected, would soon terminate, as is usual in similar cases. To the surprise of every one, however, it continued to live, was able to swallow some gruel which was given it, and, a day or two after, to suck the breast of the mother, although its cry, or rather whine, was so feeble as scarcely to be heard the length of the room. As there was some probability of its life being preserved, I proposed to the parents, as a matter of curiosity, to ascertain its weight, but to this they at that time objected. The child is still living, and at the beginning of the present month, the parents informed me that, when it was six weeks old, they ascertained its weight to be, (deducting the weight of the clothes,) *two pounds two ounces*; that since that time they have regularly weighed it once a week, and found it increase in various degrees; at present, being ten months old, its weight is twelve pounds. Although 'very weakly,' its health has not been bad, and it is now able to stand for a short time when set against the seat of a chair, without any other support."—*Lond. Med. and Surg. Journ.* Nov. 1828.

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### MEDICAL JURISPRUDENCE.

86. *Case of Premature Birth of a Living Child, without the Introduction of Air into the Lungs.* By Dr. J. P. OUVARD.—On the 14th of May, 1825, Dr. Ouvard, of Angers, examined a male infant, born the preceding day, after an ordinary labour, in the wards of the Maternité. The child had lived fourteen hours, of which fact there could be no doubt, since it happened in the midst of the patients and students of midwifery. The subject measured fifteen inches nine lines in length, eight inches nine lines from the top of the head to the umbilicus, and seven inches from the umbilicus to the sole of the foot. It was well formed and weighed four pounds and a half; the hair and nails were developed, notwithstanding which it is probable that this child had not attained more than eight months from conception.

On the occipital region there was a lump, and extravasation of blood in the cellular tissue. The dura mater corresponding to the posterior fontanelle, was ecchymosed and dark coloured. The pia mater exhibited a net-work of vessels filled with black blood; the cerebral pulp was white, and not spotted with blood; it was filled with red lines, but the vessels, when divided, did not discharge blood. The cerebrum, cerebellum, and annular protuberance, weighed eight ounces four drachms, the spinal marrow fifty-four grains, the cerebral pulp was soft and fluctuated when touched.

The lungs were dense, reddish, and heavy. Thrown in a mass upon water, they subsided to the bottom; cut into slices they still sunk; the left lobe pressed under water suffered nothing to escape but a red substance, (bouillie,) without any air bubbles. The right lobe subjected to the same test, allowed some bubbles of air to escape, from the midst of a reddish and frothy fluid. In other respects the lungs were without crepitation, and bore a resemblance exteriorly to liver broken and divided into fragments.

The gastro-intestinal mucous membrane was rose-coloured through its whole extent, especially in the small intestines; the rest of the viscera appeared sound.

This fact proves that life may be supported, (though doubtless very imperfectly,) after birth, in an infant which does not breathe enough to introduce air into the chest, and dilate the lungs. It also proves that the conclusions often drawn from the sinking of the lungs are not always strictly true, since in the instance I related the child lived fourteen hours, without our being able to say that it had breathed, though this might have happened; for otherwise, how can we suppose life to have existed. Dr. Ouvard has seen a child born which lived six hours, without being able in any manner to establish that it had ever respired. It therefore shows, that if the smallest quantity possible of air enter the lungs, life may be sustained some hours or less. Nevertheless, this fact by no

means overthrows the conclusions which ought to be drawn from pulmonary inspection. Does cutaneous respiration suffice in this case for the momentary support of life?—*Méditations sur la Chirurgie Pratique.*

87. *Case in which an Infant Cried Previous to its Expulsion from the Organs of Generation, with conclusions which may be deduced from it, connected with Medical Jurisprudence.* By J. P. OUVARD.—On the 11th of February, 1825, Dr. Ouvrard was called to assist at the accouchement of a lady about twenty-one years of age, who had never before had a child, and had experienced labour-pains for several hours. The labour advanced regularly during twenty hours. At eleven o'clock in the evening, a violent pain freed the head, (which was in the first position,) from the vulva. Immediately the occiput, the forehead, the eyes, and the nose, rolled over the fourchette, the mouth presented itself at the orifice of the vulva, and the chin caught upon the soft parts. In this position the infant sent forth a gentle cry; Dr. O. disengaged the chin, and the head was liberated. With affairs in this situation, he waited twenty-five minutes for a new contraction of the womb to effect the delivery of the shoulders. During all this time the infant never ceased giving such sharp, piercing, and loud cries as could be heard over the house. These cries, however, ceased all at once; the face became violet, and the infant was threatened with apoplexy. Seeing the danger, he hastened to disengage the shoulders, and thus put an end to the delivery. He drew blood from the umbilical cord, and soon afterwards the respiration was re-established. The mother soon recovered from her accouchement, which was followed by nothing unfavourable, and gave birth to a stout boy.

In reading this account, says Dr. O. some will perhaps be astonished at the levity with which certain physicians called upon to give their opinions in cases of infanticide, pronounce positively that the child has lived because it has breathed. This last circumstance, however conclusive it may appear, is nevertheless no indubitable evidence of life. Dr. O. goes still further, and says, that in cases similar to the one just related, it does not even constitute a sign, since it must always happen in this species of labour, that without the foreign assistance of the hand to disengage the shoulders, the infant must infallibly perish. Pulmonary examination, and all the observations relative to specific gravity, can only establish a single point, which is, that the child has breathed. This position will be found amply confirmed by Dr. Schmidt, who has noticed twenty-six cases perfectly analogous to that which I now report, and also by M. Oslander, who has had opportunities of collecting eight cases. I am far from wishing to reject the lights furnished us by pulmonary inspection, nor to overthrow the established principles relative to this subject; but when I consider that the infant of which I speak was upon the point of perishing by strangulation, I tremble to reflect that if the case has been possible once, similar ones may have happened before. Let us for example suppose that the mother had some interest in concealing her pregnancy, what might have happened? Abandoned and alone in an obscure place, without light, or any assistance, the shoulders remaining in the situation that I have described, the neck of the uterus strongly embracing the neck of the child, this must have died of apoplexy, and perhaps even presented on its neck the impression of uterine constriction; the physician called upon as a witness, would have discovered that the infant had breathed, but that it had died of apoplexy from strangulation. Upon this, a verbal process would have been issued, and in conformity to the present state of the science, an innocent woman, a perfect stranger to so odious a crime, would have been sent to the scaffold.

It is therefore important that we proceed more deliberately, make our decisions with more circumspection, and especially avoid forming such positive conclusions; hereafter it will be necessary to take into account the instances in which children have been known to cry and breathe previous to birth, under pain of confounding a most horrible crime, with the pure accidents of accouche-

ment. A child is said to have lived, when, expelled from the organs of generation it has exhibited for a certain time all the acts of life; thus the infant whilst still retained in its mother's womb, may breathe, since it can send forth cries; but if it perish whilst still retained in the uterus, although it has breathed, it cannot be said to have lived. Respiration does not establish the point of life, notwithstanding that life supposes the necessary existence of respiration, since without the establishment of that function, extra-uterine life could not take place.—*Meditations sur la Chirurgie Pratique.*

88. *Vagitus Uterenus.*—It is believed by many German writers on medical jurisprudence, that the fœtus may sometimes be heard to cry in the uterus, the fact however is questioned. M. LESAURAGE, of Caen, has transmitted to the Royal Academy of Medicine of Paris, as evidence of the fact, an account of a bitch which was taken sick when far advanced in pregnancy, and on approaching her there was distinctly heard, even at the distance of ten paces, the cries of her pups, whose movements could also be seen through the abdominal parietes. She did not bring forth her young till two days after.—*Revue Médicale, Feb. 1828.*

89. *Remarkable Symptoms produced by poisoning with Belladonna.*—"A gentleman who had been accustomed to take occasionally a purgative mixture containing forty-six grains of jalap, sent to his apothecary, instead of his physician's French recipe, a translation of it by himself into Latin, in which he had used the word *Belladonna* as the proper equivalent for the French name of jalap, *Belle-de-nuit*. The mixture was faithfully prepared according to the formula, and taken by the patient about six in the morning. The first effect was most violent head-ache, commencing about an hour afterwards, affecting chiefly the orbits, and accompanied ere long with excessive redness of the eyes, face, and subsequently of the whole body. In a few minutes the entire skin presented a uniform redness, exactly like that of scarlatina. The patient was also affected at the same time with intense redness of the throat, and great heat, which seemed to spread throughout the whole alimentary canal. Another symptom no less remarkable was an extremely painful irritation of the whole urinary passages, and especially of the neck of the bladder; in consequence of which the patient, amidst a continual talkative delirium, that always bore reference to the suffering he experienced in that quarter, was constantly demanding the chamber-pot, yet each time succeeded in passing with difficulty only a few deep-red sanguinolent drops. The physician who was summoned to his assistance at ten, after discovering the error which had been committed, immediately directed a copious blood-letting, emulsive drinks, and emollient fomentations of the whole belly. The pain in the region of the bladder nevertheless continued without abatement; and the patient, fatigued by his suffering and the fruitless efforts he constantly made to pass urine, insisted that the catheter should be introduced, although he was assured that his complaint was a suppression, and not a retention of urine. In fact, during the physician's absence, he actually sent for a surgeon and had the operation performed, but of course without receiving any benefit; a few drops only of bloody urine were withdrawn. Twenty leeches were subsequently applied to the hypogastrium; and from this treatment he experienced much relief in the course of a few hours. He passed a quiet night, and next morning complained only of a general feeling of discomfort. M. Jolly, the relater of this case, states that he has repeatedly seen the powder and extract of belladonna cause a similar scarlet efflorescence; and puts the question whether its tendency thus to induce an affection of the skin and throat parallel to that caused by scarlatina will not account for the property lately ascribed to it, especially by some German physicians, of protecting the system from the infection of that disease."—*Ed. Med. and Surg. Journ. Jun. 1829, from the Nouvelle Bibliothèque Médicale Juillet, 1828.*



90. *Rupture of the Bladder*.—MR. DELVAR relates a very singular and interesting case of this, in the *Edinburgh Medical and Surgical Journal*, for January last. A man, much addicted to the use of ardent spirits, was engaged, on the evening of October 1st, in a drunken brawl, in which he received a number of blows, in particular a severe one near to the superior and anterior part of the groin, on the left side, and another on the same side but nearer the back, both of which knocked him down. "It was proved in evidence, that for about an hour after, he assisted in unloading a vessel, without complaining of any injury; staggered home about midnight, and went to bed; arose early in the morning; twice drank more spirits; was seen wandering about in a state of apparent intoxication; fell about mid-day on the *smooth ground* near his own house; could not rise without assistance; was carried home and put to his bed, from which he never arose."

"When carried to his own house, he could not stand, and complained of pain in his bowels and faintness. The pain, almost from the first, was accompanied with some degree of swelling and tension of the belly, which gradually increased until his death. The pain was principally confined to the hypogastric and right hypochondriac regions. His mind was confused from the beginning, and the torpor increased as the mortal symptoms advanced; but until a very short time before his death he could easily be roused, so as to return rational answers to any questions which were put to him. On the most accurate investigation, it could not be ascertained that he had voided any urine from the time that he received the blows."

We pass over the treatment as of no consequence, merely mentioning that "the catheter was not passed." He died on the evening of the 5th. On examination the next day, the following appearances were observed: several marks of severe bruises on the thighs and legs; abdomen considerably enlarged; on opening the abdomen between nine and ten pounds of a bloody fluid flowed out, having no particular smell; there were, besides, about three pounds of clotted blood among the bowels, but principally in the pelvis; whole peritoneum of a dirty red colour; when its surface was wiped with a sponge, a layer of "colouring matter was rubbed off, and underneath was seen a beautiful arborescence of hair-like blood-vessels. In every other respect the viscera were sound, except the bladder, which was greatly contracted in its capacity, and thickened in its coats, and was ruptured along its superior and anterior surface to the extent of three inches and a half. The edges of the wound were ragged, as if the bladder had been rent asunder by some sudden violence."

It is a difficult question to decide when this rupture of the bladder took place. It is scarcely credible that it happened during the brawl five days before death, for the presence of extravasated urine in all the textures of the living body is accompanied with such severe symptoms, that we would have expected, had the rupture occurred then, that evidence of effusion would have been manifest in a shorter period than fifteen or sixteen hours. Mr. D. thinks it "more probable that the bladder gave way at the time that he stumbled near his own house. The bladder, it may be supposed, was distended to the uttermost, (for there is reason to believe that he made no water from the time of the scuffle,) and the concussion which the body received in falling had burst asunder its coats." This explanation, he admits, has its difficulties; the bladder was so much diminished in its capacity that it could not have contained above three ounces of fluid, and its muscular coat was increased to at least half an inch in thickness; moreover, he merely stumbled and fell forwards on *perfectly smooth ground*, where there were no stones or projecting substances. The laceration cannot be attributed to over-distention of the bladder, as in such cases, there is no rent; the urine escapes by minute openings, produced by ulceration.

The fact of the thickening of the bladder is also curious, as the man never complained of difficulty in passing urine; he had no stone, nor any stricture in the urethra.

## CHEMISTRY.

91. *New Compound of Silica and Potassa.*—"This compound, which has been prepared and described by M. Fuchs, is intermediate between glass and the oil of flints. It may be prepared by saturating a boiling solution of potash with recently precipitated silica; but better by the following process. Fuse a mixture of ten parts carbonate of potash, fifteen of quartz, and one of charcoal; pulverize the product, and dissolve it in four or five parts of boiling water, which will slowly take up nearly the whole. The solution, evaporated until of a specific gravity of 1.24, will be a viscid, opalescent liquid, which, whether evaporated further, quickly or spontaneously, will become a solid, vitreous, transparent mass, fixed in the air, and resembling ordinary glass, except that it is less hard.

"This substance has an alkaline action, it dissolves with difficulty in cold water, more easily in boiling water. It is somewhat hygrometric, and in many weeks will attract moisture from the air, which penetrating it, does not however destroy its aggregation, but causes the surface to become covered with scales or powder. Alcohol precipitates the aqueous solution; acids decompose the substance; many salts form insoluble precipitates with it. This new silicate of potash is composed of sixty-two parts silica, twenty-six of potash, and twelve of water. It may be employed as a coating for wood and other objects to preserve them from fire, and also as a lute in the laboratory."—*Lond. Med. and Surg. Journ.* Feb. 1829, from *Kastner's Archives*.

92. *Discovery of the Mode of Making the Diamond.*—"At a meeting of the Academy of Sciences, on November 3d, M. GANAL stated that he employed phosphorus for the purpose of decomposing the carburet of sulphur, by which the carbon was set at liberty under the form of small crystals, having all the properties of the diamond, and possessing the power of cutting or scratching the hardest bodies. If sticks of phosphorus are introduced into a matrass containing carburet of sulphur, covered with a layer of water, as soon as the phosphorus comes in contact with the carburet, it dissolves as it would in water of 140° or 158° of Fahrenheit, and is precipitated to the bottom of the vessel. The mass then consists of three distinct layers: the upper part of pure water, the second of carburet of sulphur, the third of liquified phosphorus. If the liquor is agitated while in this state, so as to mix the different substances, it becomes milky and turbid, and after remaining some time still, it separates anew, but apparently into two layers. The upper is formed by pure water, and the lower by phosphuret of sulphur. Between these layers is a very thin one of white powder, and which, when the matrass is held towards the rays of the sun, produces all the effects of a prism, and consequently seems to be formed by minute crystals.

"The author, encouraged by this experiment, endeavoured to obtain more voluminous crystals, which he succeeded in doing by means of the following process:—He introduced into a matrass, which was perfectly still, first eight ounces of water, then eight ounces both of carburet of sulphur and of phosphorus. As in the preceding experiment, the phosphorus first dissolved, and the three liquids took their stations in the vessel according to their specific gravities. After twenty-four hours, a very thin pellicle, consisting of a white powder intermixed with air bubbles and different centres of crystallization, was formed. After some days these pellicles gradually increased in thickness. The separation of the two lower liquids became less distinct, and after three months they seemed but one substance. The experiment having been left in action for another month, it became necessary to discover the mode of separating the crystallized substance from the phosphuret of sulphur, which was difficult on account of the inflammable nature of the substance. After various trials, more or less successful, the author determined to filter the whole through cha-

mois leather, which he placed under a glass bell, renewing the air from time to time. At the end of a month the skin was washed and dried, when M. Ganal was enabled to examine the crystallized substance which remained on its surface. Exposed to the rays of the sun, it presented numerous crystals, reflecting all the colours of the rainbow: twenty among them were large enough to be raised with the point of the knife; three others were as large as a millet seed. The latter were submitted to the inspection of M. Champigny, director of the jewellery workshops of M. Petelot, and they appeared to him to be real diamonds. M. Gay-Lusac stated that to his knowledge, M. Ganal had been occupied in the same research for a period of eight years.

"Five years since, in the month of January, 1824, M. Delatour deposited with the French Academy of Sciences a paper, whose contents were then unknown, but have since proved to relate to the manufacture of the diamond, and contain, we presume, the results of the first essays of this gentleman. The method is still a secret, and said to be essentially different from that of M. Ganal just described.

"On the 11th of November, glass tubes were exhibited to the Academy, filled with diamond dust, or, (to speak more accurately,) carbon crystallized by art. The different specimens were not obtained by the same method. The chemical properties are the same, but in appearance and hardness they are strikingly different.

"One of the tubes contains a very transparent small crystal, whose form is distinctly pyramidal. M. Delatour expects to present to the academy crystals of four or five lines in diameter.

"M. Arrago remarked on this occasion, that it would be easy to ascertain the nature of one of the crystals, as its 'facettes' were sufficiently large to show the angle of prolongation. He stated also that a person of his acquaintance entertained a hope that the decomposition of carburet of sulphur by the voltaic pile would be successful. The defective conductivity of this substance had hitherto impeded the success of the experiment, but it is confidently expected that this difficulty will be overcome."—*Lond. Med. and Phys. Journ. Feb. 1829.*

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93. *Nature of Aloetic Acid.*—M. LIEBEG finds this substance to be a combination of carbazotic acid and a particular substance having many of the properties of resins. The bitter of aloes may be formed in large quantity, by acting upon aloes with nitric acid of the specific gravity of 1.25. The substance obtained forms a purple salt with potash, but little soluble, and precipitating the salts of baryta, lead, and peroxide of iron, of a deep purple colour. When a solution of this salt was precipitated by acetate of lead, the water employed to wash the precipitate had a yellow colour, and deposited small crystals of the same colour. These crystals heated in water with sulphate of potash, gave carbazotate of potash, and from that carbazotic acid was obtained.

When aloes are treated with nitric acid of specific gravity 1.432, until the liberation of nitrous vapour ceases, and the liquid be mixed with a little water to separate a small quantity of bitter principle, then, by neutralization with potash and evaporation, a large quantity of carbazotate of potash in fine crystals is obtained.

Wool, morphia, narcotine and myrrh, did not give carbazotic acid by treatment with nitric acid.—*Annales de Chimie.*

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94. *Sugar of Liquorice.*—"The peculiar principle in the root glycyrrhiza has been long known. Doberuner and Robiquet have given processes for its separation. The following is by M. Berzelius:—The cut root is to be infused in boiling water; the cold filtered infusion is to have sulphuric acid added in small quantities, until no further precipitate is formed. The precipitate is a compound of the acid with the saccharine matter, and is to be washed at first with acidulated cold water, and then with pure water, until no free acid appears.



The precipitate is to be digested with alcohol, which leaves certain impurities, and then pulverized carbonate of potash or soda is to be added to the solution, until it is neutral; the clear liquor is to be decanted and evaporated. It is desirable to have a small excess of acid present, for which purpose put a little of the alcoholic liquor on one side, to be added at last to the neutral portion, and then leave the whole at rest, that the sulphate of potash may separate before the evaporation is effected.

"The saccharine principle is a transparent yellow mass, breaking like amber. Being heated it melts, and burns with a bright flame and much smoke. In powder it burns like resin or lycopodium. It does not change in the air. Its aqueous solution is precipitated by *all the acids*, and the more completely the stronger is the solution. The precipitates have no acid taste, but are sweet; they dissolve in water, and gelatinize upon cooling, if the solutions are strong.

"This substance also combines readily with bases forming soluble neutral solutions; those with baryta and lime are not precipitated by carbonic acid. This principle forms insoluble compounds with metallic acids and many metallic oxides. It combines also with many salts, causing their precipitation in some cases.

"The saccharine principle of the root of the wild liquorice, (*Polypodium vulgare*,) is altogether different in its qualities from the above substance."—*Journal of Science*.

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95. *Iodine Detected in the Blood*.—M. BENNERSCHIEDT has detected iodine in the crassamentum of the blood of a person who had employed for a long time frictions with iodine ointment. He could not find any indication of its presence in the serum.

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96. *Benzoic Acid in the Grasses*.—"Benzoic acid has been found by M. VOGEL in the sweet-scented vernal grass, (*Antoxanthum odoratum*,) and in the sweet-scented soft grass, (*Holcus odoratus*.) It is these two grasses which communicate to hay the aroma peculiar to themselves."—*Lond. Med. and Surg. Journ.* Nov. 1829.

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97. *New Alkali in the Eupatorium Cannabium*.—M. RIGHINI has discovered a new alkali in the *Eupatorium cannabinum*, to which he has given the name of Eupatorine, and which he considers as the active principle of this plant. This substance is obtained in the form of a white powder; has a taste sui generis; is insoluble in water; soluble in sulphuric ether and diluted alcohol. It swells in the fire and burns. It combines with sulphuric acid, and crystallizes in needles. M. R. has obtained Eupatorine in too small quantities to try its medical properties.—*Repertorio di Medic.* Torino, August, 1828.

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#### MISCELLANEOUS.

98. *Medical Statistics of the Netherlands*.—From the researches of the Royal Commission of Statistics of the Netherlands, it appears that the excess of male children over those of the female sex is 1 to 0.9427; thus in the course of ten years there were 30,485 boys born above the number of girls; but the mortality among the males is greater than among the females, and in ten years this excess was 25,400; so that at the end of ten years the excess of the males was only 5,085. The deaths throughout the kingdom are 1 in every 39 86-100 persons, and the births 1 for every 28 16-100 persons. One of the most curious and interesting approximations of two natural phenomena, however, connected with population, is that stated in M. Quetelet's "Researches on the Population, Number of Births, Prisons and Poor-houses, in the Kingdom of the Netherlands." It appears from a series of observations, made for the space of eighteen

years, and which he adduces, that the number of deaths, as well as that of births, have been in an inverse ratio to the thermometrical variations of the atmosphere. Thus the march of the thermometer, ascending from January to July at Brussels, and uniformly descending from that month till December, is observed to be accompanied by a progressive line, denoting the intensity of births in an inverse order to the above; beginning from February, which is the highest, and ending in July, when the number of births is the least. It then ascends till December, following an opposite course to the thermometrical line.

99. *Medical Profession in St. Petersburg.*—Dr. GRANVILLE informs us in his *Journal of Travels to and from St. Petersburg* that the police of the medical profession is placed upon a very judicious footing in St. Petersburg. No medical man, let his rank be what it may, can settle and practice in that city without having undergone a proper examination, and a list of all persons authorized to practice is printed yearly. A *pharmacien*, or “Aptékare,” dares not make up a prescription of any practitioner, whose name does not appear in the printed list, and still less can he venture to sell a drug, in however small a quantity, or however insignificant its nature, without a prescription regularly signed. Every prescription must be signed with the name of the physician whose advice has been taken, and must also mention the patient for whom it is written, with the day of the month and year. To the medicine a label is affixed, mentioning the date and hour of delivery, its price and the name of the “Aptékare,” and his shop; and even the most simple medicine must be sealed. The laws against professed quacks are generally put in force with great strictness. The surveillance of the medical profession, and of its rights and privileges, is confided in a particular manner to the minister of the home department, who is assisted by a council of medical men, one of the attributes of which council is to inquire into the rights to practice claimed by individuals, and to report to the minister any infraction of the established law respecting the regulation of the practice of medicine, as well as the existence of any empirical impostor. By an ukase of the late Emperor, who wished to encourage the higher branches of education in medicine, persons who have obtained the degree of M. D. are at once admitted into one of the thirteen classes of nobility.

100. *Duration of Human Life in Russia.*—Cases of longevity are not only much more common, but also more extraordinary in respect to a greater duration, in Russia than in any other part of Europe; thus, from the report of the holy synod, published in 1827, it appears that there were living in 1825, among those who professed the Greco-Russian religion throughout the empire, not fewer than 848 males who were 100 and more years old; among whom, 32 had passed the age of 120, 4 were between 125 and 130, and 4 others between 130 and 135 years of age. Out of 606,881 males who died in 1826, 2785 had passed the age of 90 years; 1432 that of 95; and 818 that of 100. Among the latter, 38 were more than 115 years of age; 24 more than 120; 7 more than 125; and one was 160 years old at his death.—*Lond. Med. Gaz. Dec. 1828.*

101. *Maison des Enfants trouvés at St. Petersburg.*—Dr. GRANVILLE states, on the authority of Dr. Köhlwör, the superintending physician, that the mortality in this institution, among the children, within the first six weeks, is from thirty to forty per cent.—*Granville's Travels to and from St. Petersburg.*

102. *Infirmiry for Diseases of the Eyes at St. Petersburg.*—This institution was established in May, 1824, and was supported from its very onset by the whole of the imperial family. The progressive increase of its operations and income, during the short time that has elapsed since its origin, is quite extraordinary in the annals of medical charities. In the second year of its existence the received income amounted to 48,734 roubles, and the number of patients treated was 11,783, of whom 3853 were new, and 273 were admitted as in patients; the

number of important operations performed was 464. During the third year the total income was 169,422 roubles, and the number of patients treated 15,079, 4794 of whom were new, 340 were lodged and boarded in the Infirmary, and 445 important operations were performed.—*Ibid.*

103. *Bristol Infirmary for Diseases of the Eye.*—This institution, we believe, was established by Mr. Estlin, the very intelligent surgeon of Bristol; and we notice it on the present occasion to call the attention of our readers to the prodigious benefits which may be conferred on the public, at very moderate expense, by judicious management. An average number of 680 patients have been admitted annually; the whole expense not exceeding 40*l.* per annum. That the medicines for such a number, many of whom it appears were in attendance for several months, should not have amounted to a larger sum, appears extraordinary; but when we learn that besides this, the house-rent, and other incidental expenses are included, and even that some patients from a distance have been maintained while under operations, it affords the most striking illustration we have met with of a maximum of benefit and a minimum of expenditure.—*London Medical Gazette*, December, 1828.

104. *Mode of Preserving Specimens of Morbid Anatomy.* By JOHN S. GASKOIN.—Mr. Gaskoin recommends the following means for preserving the appearances of diseased parts:—"Having removed the diseased part from the body, it should be as little handled or dissected as possible, especially when the effects of inflammation, congestion, &c. are to be preserved, as the blood may be pressed from, or disturbed in, the minute vessels. Let the blood which may have escaped from cut vessels, be gently washed off from the surface by a solution of the *muriate of ammonia*, or be absorbed by a soft sponge, lightly applied. The part should then be wrapped with care in old linen, and be so immersed in *one part of a saturated solution of the muriate of ammonia*, (sal ammonia of commerce,) and *two of rectified spirit of wine*. After two or three days the linen may be removed, and the part restored to the fluid.

"Should the preparation be large, or, from the nature of the disease, contain a large quantity of aqueous fluid, then an additional portion of the *muriate of ammonia* in powder should be added, to meet the excess of aqueous menstruum.

"The time necessary for maceration will mainly depend upon the size of the part to be preserved; but, generally, from ten to fifteen days will be found to be sufficient, although nothing can be lost by an extension of that time. Being taken from the macerating fluid, it should be again washed in a solution of the *muriate of ammonia*, then dissected as much as requisite, and be 'put up' at once, in *equal quantities of a saturated solution of the above salt in distilled water and rectified spirit of wine*. I should observe that, in these proportions, the part is somewhat corrugated, which is not the case if *one-third* of the saline solution be used with two of the spirit; yet, in the former quantities, I have some reason to think the appearances of disease may be more securely preserved."

This solution, he says, seems to have the property of fixing the blood in the extreme ramifications, without constringing the vessels themselves; while rectified spirit corrugating the delicate membranes of the minutest vessels, repels their contents into the larger, the thicker coats of which are easily acted on, and thus reduces the appearances of inflammation, &c.—*Ibid.*

105. *Supposed Change of Climate.*—"Professor SCHOUW, of Copenhagen, has argued plausibly against the opinion that certain climates have changed in the lapse of ages. The date tree, for instance, he says, requires a mean temperature of 78° Fahr. to bring its fruit to perfection; and it is as successfully cultivated in Palestine now as it was in the earliest times, of which he gives interesting notices. Jerico was called Palm town; and Deborah's palm tree was mentioned between Rama and Bethel. Pliny mentions the palm tree as being fre-



quent in Judea, and chiefly about Jerico. Tacitus, Josephus, Strabo, Diodorus Siculus, and Theophrastus, all speak of woods of palm trees there; and on the Hebrew coins date trees are by no means rare, and are easily recognised by their fruit."—*Magazine of Natural History*, January, 1829, from *Oken's Isis*.

106. *Epidemic at Paris*.—An extraordinary epidemic made its appearance in Paris about the commencement of June, 1828, in several parts of the city simultaneously, the nature and causes of which excited great attention among the medical men of that place. The principal symptoms were a diminution of sensibility and mobility in the extremities, accompanied with an itching or pricking sensation in these parts, sometimes attended with swelling and redness, and generally preceded by nausea, vomiting, and diarrhœa. The pain of the extremities was in many cases excessive, causing a total deprivation of sleep. The disease usually commenced with some derangement of the digestive organs, as anorexia, nausea, vomiting, and diarrhœa; in some patients these symptoms were so violent, that they supposed that they were poisoned; in general, however, they were slight. After these gastric symptoms have continued some time, (from a few days to two weeks,) they slowly disappear, and are succeeded by a series of other phenomena. The face becomes red, swelled, and painful, and is the seat of an uncomfortable pricking sensation. This is not as common as affections of the extremities. These parts are almost always red and swelled, and the patients experience various sensations in them, as prickings as if with needles, itching, lancinating pains, especially in the feet and hands. These symptoms are most violent in the lower extremities. The swelling was not constant; when it did exist it was sometimes accompanied with redness, resembling that of erythema or crysipelas; at other times there was no redness, in which case the swelling was like that of œdema. With these symptoms there was a marked diminution of sensibility, the patients lost in a great measure their perception of objects by the touch. The progress of this disease was extremely slow, and its duration of course very long; some patients were under treatment four and five months. In most cases the symptoms gradually declined in severity, motion and sensibility returned, the erythematous redness and swelling disappeared, the epidermis became detached in large plates or scales, but the patients still experienced a feeling of heaviness and stiffness in their limbs. Dissection revealed no morbid changes to which these symptoms could be attributed. The causes of this epidemic are yet unknown, though a variety of theories have been framed respecting it. It generally occurred in the lower classes of persons who are badly nourished, and live in low and damp habitations. Some physicians, as Ratier and Cayol, thought it was analogous to the disease produced by the ergot, others to the colica pictonum. M. Broussais says it is a common disease, being an erysipelas combined with gastro-enteritis. Alibert says that it is erysipelas, and some again that it is a modification of pellagra. The treatment of course was various and vacillating; the most successful, however, is said to have been that used in the Charité for colica pictonum, viz. sulphurous baths and douches.—*Revue Médicale*. Dec. 1828, and *Bulletin des Sciences Médicales*, Nov. 1828.

## AMERICAN INTELLIGENCE.

*A Case of the deleterious effects of Opium on an Infant.* By C. DRAKE, M. D. of New York.—Some years ago I witnessed a remarkable recovery from the ill effects of opium, which may be considered interesting in some of its particulars. The case shows how small a quantity of this drug may produce deleterious effects on the infant system; the efficacy of cutaneous stimulation by means that can almost always be readily commanded, and are less exceptionable than such as are commonly resorted to under these circumstances; and it besides inculcates the propriety of the physician almost never despairing of recovery in these cases, or of relaxing his efforts as long as there are any remains of life.

Whilst on a visit to a relative in a neighbouring city, in the summer of 1815, I was requested about 6 P. M. to see the infant of a next door neighbour, aged about fourteen months, to whom the mother, about half an hour before, had given a dose of paregoric for some trifling catarrhal affection. The mother had become alarmed, fearing she had given too large a quantity of the medicine, as she observed the child to breathe somewhat unnaturally, and was aroused from its sleep with some difficulty. She assured me that she had given it only the half of a tea-spoonful of some paregoric she showed me, and which she had obtained from a neighbour whom she knew was taking it under the direction of a physician. I did not imagine that so small a quantity could produce any unpleasant consequences, but in order to allay her apprehensions, and as the child's previous indisposition indicated the propriety of the measure, I administered in divided doses, fifteen grains of ipecacuanha, which I happened to have in my pocket. Finding the medicine not likely to operate, I sent for more emetic medicine, and requested that I might be relieved from the care of the case by the family physician. He arrived in a few minutes, and took charge of the patient. I was again requested between ten and eleven o'clock to visit the child. I found that three or four physicians had been in attendance—that they had faithfully plied the most approved means without relief, had ceased further efforts as hopeless, and retired leaving only the family physician. The nurse was holding the child on a pillow, before an open window, for the benefit of the fresh air. Its skin was pale, cold, and covered with moisture; its respiration short, quick, stertorous, and attended with loud rattle, threatening speedy dissolution. I agreed with the gentleman in attendance that the child would not at furthest live more than an hour, and that it was useless to make trial of any additional means. Having a midwifery case on hand that required his attendance, he requested he might be permitted to retire, as he could be of no further service to the child; to which the parent replied, that if the doctors would only make one effort more he would be satisfied, and they might leave. At the moment I happened to cast my eye on a bottle of Cayenne pepper standing on the sideboard, and proposed to make a hot cataplasm of it to be applied to the abdomen, to which the doctor readily assented. Instantly the pepper and mustard were mixed into a cataplasm with brandy and applied over the child's abdomen; similar ones applied to the feet and hands, and the child wrapped warm in its cradle. We now left the house, believing the child would shortly expire. At about twelve o'clock, perhaps forty or fifty minutes after applying the sinapisms, a messenger requested me to hasten to the house, as the child had been seized with a convulsion, and perhaps something might be done. On entering the room, I saw to my astonishment, the child sitting up on the nurse's lap, pale, haggard, and with drooping head, but breathing naturally, and recovered from

the poisonous effects of the opium. The sinapisms were instantly removed, and the parts they covered found of a bright red. The child was well washed in a warm bath to remove any adhering particles of the application; took some liquid nourishment, with a small quantity of wine in it, and composed in its cradle to rest. The next morning I had the satisfaction to find the little patient merely languid and enfeebled from the last night's accident.

On inquiry of the physician, from whom the paregoric was obtained, he told me that he was in the habit of making his paregoric of four times the common strength, for he saw no reason why so much spirits should contain so little opium. Admitting then that the child took, from a miscalculation of the mother, nearly a tea-spoonful, it could not at most have taken more than a grain of opium, and probably somewhat less. Let this case be a warning to physicians how they vary from the standard directions in preparing the officinal medicines.

It may be thought by some, and I am myself inclined to the opinion, that this unexpected recovery, under the most desperate circumstances, is in a great measure to be attributed to the small quantity of opium taken, and that the external stimulation prolonged the vital action until the deleterious powers of the poison were expended. Under this view, then, the use of such remedies is of the utmost importance, and the case, moreover, shows that it is never too late to attempt the removal of the narcotic poison by means of the stomach pump, if there be the slightest indications of life remaining.

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*Pyroligneous Acid in Sphacelus, and Fætid Ulcers.*—DR. THOMAS Y. SIMONS, of Charleston, has favoured us with the first Number of the *Carolina Journal of Medicine, &c.* published in January, 1825, in which are some interesting observations on the use of pyroligneous acid in sphacelus, and fætid ulcers. The first case in which Dr. S. applied the acid was in one of mortification of the scrotum and perineum from infiltration of urine. "One portion of the acid diluted with six parts of water was applied constantly to the sloughing surface. In twenty-four hours a line of demarcation was observed. In a day or two more the mortified surface separated, and healthy granulations appeared." Dr. S. has since "been called in consultation to a case, where the penis was much tumefied and gangrenous, arising from destruction of part of the urethra, and infiltration of urine into the cellular texture. The pyroligneous acid wash was applied. In two days the sphacelus separated, and a healthy granulation took place." Dr. S. recommends this application "in every case of sphacelus, as well as of fætid ulcers." Dr. S. also writes to us that he has found it "infinitely superior to any other means in phagedenic ulcers—and in preventing the progress of mortification."

Our readers may recollect that it was used by Dr. Horner in the case of Waggoner, (See Vol. III. p. 92,) with apparent benefit. We have used it in caries of the bones of the ear with much advantage. The powers of this article are worthy of further investigation.

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*Case of Injury of the Head.* By J. W. HEUSTIS, M. D. of Alabama.—A negro girl, about ten years of age, belonging to Mr. M. R. on ascending a hill with a pail of water, fell and struck the side of her head against a projecting slab. Her master, upon examining the wound, from its trivial appearance, paid but little attention to it, and ordered his negro nurse to dress it. The girl appeared to suffer but little inconvenience for several days, and pursued her ordinary business, making no complaint, and evidently in good health. In about a week after the accident she became indisposed, was confined to her bed, and was said to be attacked with fever. I was at this time in attendance on several of the white children of Mr. R.'s family, who were sick with the influenza. As the negro girl continued to grow worse, Mr. R. requested me to walk and see her. He observed that subsequently to receiving the injury I have mentioned, she was attacked with fever, for which she had been treated by them in their usual way, judging that the fever was her sole complaint. Upon examination



I found her in a state of much debility; derangement of intellect; pulse small, frequent, irregular, and intermitting: when particularly interrogated as to the seat of her pain, she would apply her hand to the wounded part of her head. The wound was small, and just sufficient to enable me to see a small portion of the skull, which appeared white, and divested of its periosteum. I immediately observed that there was a collection of matter beneath the skull, and that the only chance for the child's recovery was from the operation of trephining. As I was then a distance from home, the operation was postponed two days, before I procured my instruments, when I proceeded to perforate the cranium. The injury was received just above and behind the left ear, near the posterior and inferior angle of the parietal bone; in this place I, accordingly, dissected up the integuments, and applied the trephine. Through the opening in the cranium thus made, there was a very profuse discharge of offensive matter. After which the patient's intellect returned, and she was able to speak with her ordinary intelligence. She remained much relieved for twenty-four hours; after which she was seized with fever, and pain in the fore part of the head; for which, on my next visit, I directed a cathartic, and an epispastic to the affected part. The blister succeeded in mitigating, or removing the pain, (for the dread of the knife might, very probably, cause her to conceal her feelings,) but the fever still continued, though not severe nor constant, being worse every other day, with remissions of twelve or fourteen hours continuance. For the mitigation of these febrile paroxysms, I directed the bowels to be kept open by the occasional use of Epsom salts, and the use of cream of tartar during the fever: in the intervals quinine was given to invigorate the debilitated constitution. After the operation, the matter continued to flow from the head for a day or two, and then stopped; she then became subject to daily exacerbations of fever for the space of nearly three weeks, and at times her symptoms assumed the most threatening aspect. At the end of the time just mentioned, however, the wound again commenced running, and from this period she began rapidly to improve, and finally recovered.

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*Case of Deformed Pelvis, in which Delivery was successfully effected, Embryulcia having been performed in two preceding pregnancies.* By WILLIAM M. FAHNESTOCK, M. D.—On the 20th of October, 1825, I was requested to visit Mrs. A. of Manayunk, then in her third parturition. Her former labours were truly distressing and unfortunate, suffering the pains and racks of a powerful uterus and vigorous system eight and forty to sixty hours, and then being obliged in both instances to submit to embryulcia, under the impression of a deformity existing so as to prevent the expulsion of the offspring; and her physician deemed it his duty on the last occasion to advise her to avoid the recurrence of so unpleasant an expedient, and the jeopardy of her life, which she incurred in this condition by denying herself the lawful gratification of the connubial state. Her children were very large, partaking of the structure of the mother, who is short, and extremely lusty; and she was further assured that the conformation of the pelvis would not even admit of giving birth to a child of the most ordinary size. The admonition, however, as may be supposed, was not regarded, and she had arrived at the full period, and been two hours in labour when I was first consulted. I was apprised of her critical situation, and prepared myself to meet and encounter the most painful emergency. On examination, the deformity was discovered, but ample capacity also for the passage of the child. The deformity would have been sufficient in this presentation, which was the first, and naturally the best, to impede the descent into the pelvic cavity. There was but little contraction of the straits, excepting reverse of position, the greater diameter being the antero-posterior, and the lesser at the inferior strait being the sacro-pubic.

After congratulating the distressed sufferer, and encouraging her to fortitude at the prospect of being a happy mother, I proceeded to change the head from the *first* to the *third* position, premising the operation by an injection to evacuate the rectum. Having obtained advantage of the greater diameter, it rea-

dily passed down to the junction of the sacrum and coccyx, where it was again arrested, presenting the great diameter of the head to the smaller of the inferior strait. This was remedied by making another change, which gave it a transverse direction to the natural position at this point in a healthy pelvis, and obliged the occiput to escape beneath the tuberosity of the ischium. In twenty minutes after I entered the chamber, I had the extreme felicity of presenting the delighted family with a living female child of extraordinary dimensions. The sequel was mild and as favourable as could be desired. I shall only add in relation to the patient, that I had the happiness of conducting her safely through another labour on the 12th of the following September, ten months and twenty-three days afterwards. It may also be proper to remark, that the patient reared the infant at her breast until the quickening of the second child.

*Medical Statistics.* By I. HAYS, M. D.—The mortality during the early periods of life is usually so great that the following facts are worthy of being recorded. During a period of three years and eleven months, ending 1st of January last, no death occurred among the children in the Philadelphia Orphan Asylum; on the 1st of January there was one death; none since then up to April 20th, making only one death in four years and four months nearly. Children are admitted into this institution from the earliest infancy, boys to the age of five, and girls to that of six years, provided they are not suffering, at the time of their admission, from any contagious or incurable disease, and they are retained until twelve years of age. The number of children during the last four years has averaged about one hundred; sometimes there has been eight or ten less, at others as many more. The asylum is situated at the north-western part of the city plot, and there are very few houses in the immediate vicinity. This district has been for the last few years much affected with intermittent fever, and during the last summer only four of the children in the asylum escaped the disease, and some have had repeated attacks of it.

*On the Employment of Cotton as a Dressing for Blisters.*—Dr. A. P. MERRILL, of Natchez, Mississippi, in a communication in the *North American Medical and Surgical Journal*, for April last, recommends the employment of cotton as a dressing to blisters. "Blisters," says he, "that are not required to be kept discharging for any length of time, are readily healed by the application of finely carded cotton, as in cases of vesication from burns. The cotton should be applied as soon as the vesicating plaster is removed, half an inch or more in thickness, and sufficiently large to ensure the complete absorption of the discharge. In two days, under ordinary circumstances, a new cuticle will be formed and the blister cured. This dressing gives no pain, and may be adopted with particular advantage in dressing blisters upon the nucha, when the patient is confined in bed, and also for persons who are not confined by indisposition; as blistered surfaces, when dressed in this manner, give so little inconvenience as not to interfere with the motions of the body in common exercise."

*Case of Preternatural Membrane in the Vagina.* By WILLIAM HALL RICHARDSON, M. D. Professor of Obstetrics in Transylvania University.—This was the case of a woman in labour with her third child, the delivery being prevented by a membranous septum across the vagina. In the centre of this septum there was a small hole, capable of admitting the blunt end of a small probe, through which the waters were discharged. The membrane was divided, and the woman safely delivered. The previous history of the woman afforded no clue to the causes of the formation of this septum. Her previous labours had been tedious.—*The Transylvania Journal of Medicine*, Feb. 1829.

*Account of the Dengue as it prevailed at Antigua, West Indies.* By THOMAS NICHOLSON, Surgeon.—We have taken some pains to furnish our readers with all the information we could collect, respecting this epidemic, inasmuch as

many of them may be called on to treat it, as it appears still to be extending itself. The following description of it as it appeared in Antigua, is from the *Edinburgh Medical and Surgical Journal* for January last. The disease made its first appearance at Antigua, in January, 1828, and during this and the succeeding month, prevailed to such an extent that very few of the inhabitants of St. John's escaped.

The attack was usually ushered in by an "intense head-ache, with flushed face, pains in the back, wrists, and ankles, a weariness in the limbs, and great prostration of strength. Flexion of the finger-joints was performed with difficulty and pain. The skin was hot, but rather moist, and acutely sensible of the impressions of the external air, from which the patient shrunk under a load of bed-clothes, quite unusual in a tropical climate. The stomach was generally irritable at the commencement of the attack, and the action of vomiting increased the violence of the head-ache, which at this period of the disease was always the most urgent symptom. In the course of thirty-six or forty-eight hours the febrile symptoms abated, and on the third day the patient probably left his bed free from complaint; but on the fourth, or from that to the eighth day, the eruption, in a great majority of the cases, made its appearance.

"The first symptom of this occurrence consisted in the patient complaining of a pricking sensation in the soles of the feet and palms of the hands. These became swollen, and presented a number of red points, which became gradually diffused over the whole body in the form of wheals or papulæ, and accompanied with excruciating pains of a rheumatic character. The eruption disappeared in the course of twenty-four hours, and was followed in a few days by desquamation of the cuticle. In those cases in which the eruption was distinct, the pains usually vanish with it, leaving only a little œdematous swelling of the ankles. But in others, and these were usually not attended with the eruption, the pains continued with exacerbations and remissions for several weeks, nay months. The patient was rendered incapable of walking; and the fingers were often so much swollen, as to preclude the possibility of his following any manual occupation.

"Such was the general progress of the disease as observed in several hundred cases which I attended in this island. In its attack and general progress it bore a striking resemblance to influenza, whilst the eruption resembled that of measles; but in no instance that has come to my notice was it accompanied with catarrhal symptoms. Like the other exanthems, I am inclined to think that it was of a contagious nature. Its slow and gradual progress from one family to another, and from St. Thomas and St. Bartholomew, the chief mart of the Caribbæan Islands, to all the colonies holding intercourse with them, its prevalence at very different seasons, and different states of the thermometer and hygrometer, lead me to suppose that it originated from a specific miasm, rather than from atmospheric influences only.

"The treatment may be summed up in a few words. Brisk purgatives, saline diaphoretics, the warm bath, or pediluvium, formed the chief remedial measures during the febrile stage; and the cold affusion, followed by friction with dry flannel, or some rubefacient liniment, was found most effectual in relieving the sequelæ of the disease. At the commencement of the epidemic, blood-letting was had recourse to; but the head-ache was not relieved by this measure, and the convalescence was rendered more tedious. In one case only, which was ushered in with epileptic convulsions, bleeding from the temporal artery seemed to do good. None of the cases that came under my observation proved fatal; nor do I believe any instance of death from this epidemic ever occurred in this island.

"In your ninety-fourth number, p. 172, I observe that an epidemic fever similar in its attack to that under consideration prevailed in Calcutta and Berrampore in 1824 and 1825; and in the third volume of the *Edinburgh Journal of Medical Science*, p. 229, Mr. Orr describes a similar epidemic which was prevalent on board the *Asia* in February and March, 1825. The latter does



not appear to have been accompanied by any eruption; and the former, though attended with an inflammatory blush or papulæ during the febrile stage, was not followed by the severe arthritic pains which characterized the epidemic of the West Indies."

*On the Use of Opium in Inflammatory Diseases.* By F. G. KING, M. D. of New York. Communicated in a letter to Professor V. MOTT.—"In reply to your inquiry as to the use of anodynes and opium by the late Dr. Post, I have to remark, that in conversation with him some two years past, relative to Dr. Armstrong's practice in inflammatory diseases, he told me that the use of opium, as recommended by that gentleman, (except in *larger doses*,) was corroborated by his own experience for a long series of years, and that to him it was by no means a novelty: for that in 1804, he was called to a child about three years of age, suffering under a violent pneumonic attack, accompanied by pain, cough, and great febrile excitement. That he accordingly bled, blistered, and evacuated the patient, afterwards placing him under the use of antimonials, but all without benefit. Matters proceeded from bad to worse, until the child, exhausted by constant cough and excessive restlessness, seemed nearly at the point of death. Under these circumstances, he determined to quiet all these irritating symptoms by a powerful anodyne, and accordingly exhibited sixty drops of laudanum. Two hours after, he was called to the child, then supposed by its parents to be dying. He found the features sunken, the surface covered with a cold clammy sweat, and secretions of an unpleasant appearance about the eyes and nostrils, but the pulse had diminished in frequency, and was more full; the respiration was slower, and every thing indicated the full and desired action of the anodyne. The parents were astonished to hear the physician say that the child would soon be better. The next morning all untoward symptoms had subsided, and the child became rapidly convalescent and recovered.

"This was his first trial of anodynes in such affections; his *experiment*, if you please; but a few months afterwards, a similar case occurring, he immediately resorted to the anodyne; depletion and evacuants having been premised, and with similar success, since which period he has generally continued that mode of practice; latterly, however, substituting the Dover's powder in place of laudanum, in pneumonic attacks.

"In 1810, he was called in consultation upon a gentleman in Jersey, suffering under enteritis. He found that he had been repeatedly bled, blistered, and evacuated, but to no advantage; the pain still continued acute; the pulse was small, frequent, and corded: the skin dry and hot. Under these circumstances he suggested the propriety of exhibiting a powerful anodyne, in order to quiet all irritation, and give nature an opportunity of recovering herself. After a little hesitation on the part of the attending physician, it was finally determined to adopt the course proposed, and one hundred drops of laudanum were directed; an hour elapsed—no sensible effect having been produced, when the *dose was repeated*, and in half an hour the patient was under its full influence. He awoke the next day free from pain or tenderness, and so recovered. The same gentleman has been frequently attacked since with the same affection, and uniformly after being bled and evacuated, he has recourse to his anodyne, which rarely fails to quell the disease. But to be efficacious, the dose must be *heroic*, at least such was the opinion of Dr. Post, who often remarked that practitioners, especially in England and France, were not aware of the value of opium in inflammatory diseases, for even when employing it in such cases, their doses were too trivial to exert any marked influence over the malady. He himself always exhibited it under the opinion, that to obtain its soothing effect upon the system, and its *paralyzing* influence over the disease, it must be given in large doses. In diarrhœa and certain conditions of dysentery, after having cleansed the passages, he employed laudanum or Dover's powder with the happiest effect; in fact, he rarely used much else than salts and Dover's powder in diarrhœa, in adults. In his own case he was no less prodigal of anodynes than with his pa-

tients. Being, as you well know, for many years a constant prey to pleuritic affections, his treatment of himself was short and efficacious, viz. blisters and purgatives, followed by eighty or one hundred drops of laudanum, which quieted his cough—allayed pain, and soon placed him in a condition to resume his business.

“In conclusion, permit me to state an occurrence which took place under my own eyes, two years previous to his death. He was then violently attacked with pleurisy, accompanied with much fever, for which he had been purged and blistered, and at the period in question, was under the use of antimonials. At this time he directed me to give him seventy drops of laudanum. I remonstrated, directing his attention to the dryness of his skin, its increased heat, and the frequency and hardness of his pulse. His answer was, ‘believe in my experience rather than in your theory; give me seventy or eighty drops of laudanum, and an hour will convince you of its propriety.’ It was given, and within the hour his pulse became calm, full, and slow; his skin was covered with a gentle perspiration, and his condition strikingly improved. He left his bed the next day, and frequently since has said to me, ‘I think I have given you a clinical lecture that you will remember.’”

*Gunshot Wound of the Lungs and Heart.*—Dr. LEONARD RANDAL of Tennessee relates in our cotemporary, the *Western Journal of the Medical and Physical Sciences*, a novel and very interesting case of this kind. A negro boy, aged fifteen, was accidentally shot, April 5th, 1828, with a fowling-piece. When the gun was discharged, the boy was but six feet from its muzzle, and the whole charge of shot entered on the left side of the sternum about an inch and a half below its lower extremity. He fell to the ground immediately, his pulse became scarcely perceptible, and his breathing difficult; the hæmorrhage was not profuse. He soon expectorated blood freely, and on a dose of oil being given him, he vomited, rejecting with the oil a large quantity of wind. On the morning of the 7th of April he became extremely restless, his pulse was weak and intermittent, syncope came on, and he appeared dying; stimulants were given, and he revived. In the afternoon his bowels were opened by medicine which had been given in the morning, and he seemed much better.

*April 8th.* In the morning much better; afternoon fever, pain in the breast, œdematous swellings of feet and legs. Next morning, (9th,) the wound began to slough, he was restless, his pulse very weak, frequent, and intermitting, extremities cold, bloody expectoration, respiration difficult. The next afternoon considerable fever. “*April 11th.* The wound had sloughed so considerably as to form a hole into the thorax, two-thirds of an inch in diameter.” On the 12th, the wound put on a healthy appearance and began to granulate; it afterwards continued to heal, “and in three or four weeks was completely cicatrized; the œdematous swelling of the lower extremities disappeared in a week or two after the last date, and although extremely emaciated, he was able to walk about, and had many appearances of getting well. When in this promising condition, he relapsed, apparently from indulging himself too freely in a meal of strong diet. From this relapse he did not recover, a hectic fever supervened, and he died on the night of the 11th of June, sixty-seven days after the accident.”

On examination of the body by Dr. Randal, assisted by Dr. Hudspeth, who had attended the patient with Dr. R. they found several shot lodged against the ribs—the membranous covering of the ribs and cartilages inflamed; part of the pericardium adhering to the surface of the heart; the left lobe of the lungs inflamed and adhering to the pleura, and lodged in various parts of the substance of the former, a number of shot. The right lobe nearly obliterated, dense, its cellular substance entirely lost, a small portion of serum in the pleura. The heart was considerably enlarged, its parietes in some parts nearly cartilaginous, and in the cavity of the right ventricle there were lying loose three shot. “This ventricle was greatly enlarged, and lined with a thick coat from which there projected numerous papillæ of a dun colour, giving it the appearance of

the upper surface of the tongue of an ox. On opening the *right auricle*, we found *two shot in its cavity*, also lying detached. The internal surface of the auricle did not appear to have sustained much injury from their presence. The shot had entered the heart about one-third of the way from its base to its apex, the wounds made by them were at a little distance from each other; they had all cicatrized, but the spots were plainly to be seen. In the cavity of the peritoneum, as in that of the pleura, there was a small quantity of effused serum. The liver appeared to be somewhat enlarged, but not otherwise much diseased, except about the gall-bladder and its duct, where there were some gangrenous appearances, and part of the colon was also gangrenous."

*Professor Mott's Biographical Memoir of Wright Post, M. D.*—By the unanimous request of the Medical Faculty and Students of Rutgers College, Professor MOTT has published his excellent Biographical Memoir of Wright Post, M. D. late Professor of Anatomy and Physiology, and President of the College of Physicians and Surgeons in the City of New York. This memoir forms an interesting addition to the medical history of our country.

DUNBAR'S *Essay on the Structure, Functions, and Diseases of the Nervous System*.—This is an inaugural dissertation, presented in March, 1828, for the degree of M. D. It contains a very good sketch of the present state of knowledge respecting the nervous system, and is highly creditable to the author, John R. W. Dunbar, M. D. of Virginia. Originality is not usually the merit of an inaugural thesis, and this does not lay claims to such; but it displays much industry and research, and the credit is due to the author of restoring to Bartholinus the honour of some anatomical discoveries, which have generally been attributed to modern anatomists.

*The Western Journal of the Medical and Physical Sciences.*—DR. DANIEL DRAKE has become sole editor and proprietor of this work, and proposes to bestow upon it all the time and attention that can be spared from his professional duties; we wish him success. He has adopted, we believe, the most effectual means to secure this, in offering a remuneration to contributors. He offers—

"I. A receipt for the year's subscription to the Journal, for every paper, of not less than four pages, which shall be deemed worthy of insertion.

"II. One dollar a page, for every communication, exceeding four pages, which may, from its merits, be entitled to publication.

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"1. The general principles of the pathology and treatment of the diseases of the negroes of the Southern States; with a particular application of them to the malady generally denominated Negro Consumption; reference being constantly had to the constitutions and diseases of the whites of the same region as standards of comparison.

"2. The treatment of autumnal fever on the principles of Broussais; with a comparative estimate of the success of that plan, and the one previously pursued, illustrated by original cases.

"3. The remote cause and morbid anatomy of the disease denominated in the Western country the '*Sick Stomach*,' with a successful discussion of the question, whether it is a new disorder.

"4. The successful application of the process of Civiale, to the destruction of the *calculus vesicæ*, established by American cases.

"The dissertations to be accompanied, as is usual in such cases, by private letters containing the names of the authors; which letters will not be opened until a decision is made on the respective merits of their papers."

A translation of BECLARD'S *Elements of General Anatomy* is preparing for the press. By JOSEPH TOGNO, M. D.



## UNIVERSITY OF PENNSYLVANIA.

*At a Medical Commencement, held March 21st, 1829, in the Saloon of the Masonic Hall, Chesnut street, the Degree of Doctor of Medicine was conferred upon the following Gentlemen, who had passed their examinations by the Medical Faculty.*

NOVA SCOTIA.	SUBJECT OF THESIS.
Edward L. Brown, . . .	<i>Causes of Malignant Epidemics.</i>
ISLAND OF CUBA.	
Joseph M. Urquiola, . .	<i>Menstruation.</i>
RHODE ISLAND.	
Alexander P. Moore, . .	<i>Rubeola.</i>
NEW YORK.	
Gilbert S. Fowler, . . .	<i>Puerperal Fever.</i>
CONNECTICUT.	
Josiah Barnes, . . . .	<i>Spina Bifida.</i>
Caleb Ticknor, . . . .	<i>Influence of Diet, Dress, and Amusement upon Health.</i>
MAINE.	
Israel B. Bradley, . . .	<i>Cæsarean Operation.</i>
NEW JERSEY.	
Lewis Drake, . . . .	<i>Trachitis.</i>
Charles Higbee, . . . .	<i>Medical Electricity, Galvanism, and Magnetism.</i>
Alison Ely Perrine, . .	<i>Accidental Uterine Hæmorrhage.</i>
Robert J. Woodruff, . .	<i>Cause of Yellow Fever.</i>
James S. Carpenter, . .	<i>Hepatitis.</i>
John H. Blackwell, . . .	<i>Morbid Effects of drinking Cold Water.</i>
Joab W. Hunt, . . . .	<i>Dysentery.</i>
PENNSYLVANIA.	
Richard K. H. Sims, . .	<i>Non-existence of Syphilitic Virus.</i>
Samuel Maclay, . . . .	<i>Intermittent Fever.</i>
Robert R. Dorsey, . . .	<i>Efficacy of Rest in Injuries of the Knee.</i>
Daniel Lachenour, . . .	<i>Ptyalism.</i>
Martin Weaver, . . . .	<i>Dysentery.</i>
Hugh Meredith, . . . .	<i>Retrocedent Gout.</i>
Richard Maris, . . . .	<i>Articular Affections.</i>
Thomas Pritner, . . . .	<i>Lead Disease.</i>
Samuel C. Merwin, . . .	<i>Generation.</i>
Esaias Kinzer, . . . .	<i>Position in Surgical Diseases.</i>
George Thomas, . . . .	<i>Influence of Habit.</i>
Henry D. Dietrich, . . .	<i>Hæmoptysis.</i>
William Rinehart, . . .	<i>Hepatitis.</i>
William L. Sterigere, . .	<i>Angina Pectoris.</i>
George Halberstadt, . .	<i>Structure and Pathology of Mucous Membranes.</i>
Joseph Peace, . . . .	<i>Delirium Tremens.</i>
James C. Kennedy, . . .	<i>Trachitis.</i>
Charles Huffnagle, . . .	<i>Dyspepsia.</i>
David M. Fort, . . . .	<i>Cholera Morbus.</i>
Diller Luther, . . . .	<i>Caries of the Spine.</i>
Joshua Y. Jones, . . . .	<i>Typhus Fever.</i>
William Irvin, . . . .	<i>Gastritis.</i>
John J. White, . . . .	<i>Circulation.</i>
John Vaughan Smith, . .	<i>Gastritis.</i>
Edward H. Glentworth, .	<i>Jaundice.</i>
William N. Johnson, . .	<i>Music in Mental Diseases.</i>

Joseph Togno, . . . .	<i>Endosmosis and Exosmosis.</i>
Charles Fronefield, . . .	<i>Scrofula.</i>
Henry Lippincott, . . .	<i>Hæmoptysis.</i>
Joseph M. Heister, . . .	<i>Passions.</i>
Charles W. Duffield, . .	<i>Hæmoptysis.</i>
Robert R. Reed, . . . .	<i>Vital Functions and Mechanical Force.</i>
Henry Pettit, . . . .	<i>Hydrocephalus.</i>
Horatio N. Morris, . . .	<i>Digestion.</i>
Samuel J. Hobson, . . .	<i>Iodine.</i>
George Powell, . . . .	<i>Erysipelas.</i>
Ralph Hammersly, . . .	<i>Metastasis.</i>
Amos Pennebaker, . . .	<i>Respiration.</i>
Aaron Torrence, . . . .	<i>Caries of the Spine.</i>
Columbus C. Conwell, . .	<i>Vegetable Chemistry.</i>

## DELAWARE.

Samuel Murphey, . . . .	<i>Hepatitis.</i>
Thomas F. Dale, . . . .	<i>Diseases of the Alimentary Canal in Children.</i>
Henry Gibbons, . . . .	<i>Varioloid.</i>

## MARYLAND.

Lyttleton M. Robertson, .	<i>Menstruation.</i>
Albert R. Ober, . . . .	<i>Diabetes.</i>

## VIRGINIA.

Marvin R. Griswold, . . .	<i>Dyspepsia.</i>
Orlando Fairfax, . . . .	<i>Acute Stage of Dysentery.</i>
Joseph E. Cox, . . . .	<i>Hæmoptysis.</i>
James Milton Inge, . . .	<i>Gastritis.</i>
William Baylor, . . . .	<i>Cholera Infantum.</i>
Cuthbert D. Barham, . .	<i>Hæmoptysis.</i>
William H. Edwards, . . .	<i>Cholera Infantum.</i>
William Henry Shield, . .	<i>Hepatitis.</i>
James S. Tunstall, . . .	<i>Gastritis.</i>
John N. Powell, . . . .	<i>Uterine Hæmorrhage.</i>
Benjamin J. Harrison, . .	<i>Diet in Convalescence.</i>
William Smith, . . . .	<i>Tic Douloureux.</i>
Peter H. Anderson, . . .	<i>Typhoid Fever of Amelia.</i>
George J. Smith, . . . .	<i>Gastro Enteritis.</i>
Singleton Jones Cooke, . .	<i>Mechanism and Physiology of the Human Head.</i>
William E. Hardaway, . .	<i>Gonorrhœa Virulenta.</i>
Henry D. Magill, . . . .	<i>Hæmoptysis.</i>
Conway Rollins Nutt, . .	<i>Bronchocele.</i>
Henry K. Jones, . . . .	<i>Dysentery.</i>
John G. Williamson, . . .	<i>Epilepsy.</i>
William R. Smith, . . . .	<i>Anatomy and Functions of the Skin.</i>
Nicholas M. Sebrell, . . .	<i>Enteritis.</i>
John D. Porter, . . . .	<i>Bilious Diseases of Rappahannock.</i>

## NORTH CAROLINA.

Michael D. Donnellan, . .	<i>Effects of Cold.</i>
Milo A. Giles, . . . .	<i>Syphilis.</i>
William P. Morgan, . . .	<i>Small Pox, and causes of failure in Vaccination.</i>
Nicholas L. B. Stith, . .	<i>Dysentery.</i>
John Wesley Potts, . . .	<i>Medical Topography and Autumnal Fever of Washington, N. C.</i>
Thomas Davis, . . . .	<i>Dysentery.</i>

## SOUTH CAROLINA.

William G. Adams, . . . .	<i>Chronic Dysentery.</i>
Solomon Etting Myers, . .	<i>Dyspepsia.</i>
Thomas Hunt, . . . .	<i>Pathology of Jaundice.</i>
Albert G. Goodwyn, . . .	<i>Hæmoptysis.</i>

Joel R. Adams, . . . .	<i>Hæmorrhoids.</i>
Martin Philips, . . . .	<i>Icterus.</i>
ALABAMA.	
Fleming Jordan, . . . .	<i>Hepatitis.</i>
Henry S. Levert, . . . .	<i>Metallic Ligature of Arteries.</i>
GEORGIA.	
Augustine Owen, . . . .	<i>Acute Bronchitis.</i>
Clark D. Parks . . . .	<i>Effects of Cold.</i>
Thomas W. Ingram, . . . .	<i>Sanguiferous Circulation.</i>
John B. Wiley, . . . .	<i>Cold and Heat as Causes of Disease.</i>
DISTRICT OF COLUMBIA.	
Thomas Miller, Jr. . . . .	<i>Jaundice.</i>
KENTUCKY.	
Norborne A. Galt, . . . .	<i>Idiopathic Dyspepsia.</i>
OHIO.	
Edson B. Olds, . . . .	<i>Secale Cornutum.</i>
Joab Wright, . . . .	<i>Medicinal Qualities of Water.</i>
LOUISIANA.	
Edward R. Chew, . . . .	<i>Strictures of the Urethra.</i>
Frederick N. Ogden, . . . .	<i>Gunshot Wounds of Intestines.</i>
TENNESSEE.	
Robert H. Rivers, . . . .	<i>Hæmorrhoids.</i>

TOTAL, 107.

W. E. HORNER, *Dean.*

On the same occasion the corner-stone of the New Medical Hall was laid by the Right Rev. WILLIAM WHITE, D. D. Bishop of Pennsylvania, and an inscription to the following effect, along with the list of Graduates, was deposited; a suitable Address being delivered to the graduates and to the public, in the Masonic Hall, by the Rev. WILLIAM H. DE LANCEY, D. D. Provost, &c.

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John Andrew Shulze, Governor, John B. Gibson, Chief Justice, of the Commonwealth of Pennsylvania.

George M. Dallas, Mayor of the City of Philadelphia.

This inscription, deposited March the twenty-first, A. D. one thousand eight hundred and twenty-nine, commemorates the laying of the corner-stone of the New Medical Hall, fifty-four years after the original organization of the Medical Faculty by Drs. Morgan and Shippen. The institution having in the mean time conferred the Degree of Doctor of Medicine upon upwards of two thousand Gentlemen educated within its walls, who, dispersed in different quarters of the United States, have thus extended the blessings of sound Medical Instruction, and in many instances organizing themselves into New Schools of Medicine, have thus made the University of Pennsylvania the Parent of Medical Science in the United States.

Architect, William Strickland. Stone-cutter, John Struthers. Bricklayer, Daniel Groves. Carpenter, John O'Neil.

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TRANSYLVANIA UNIVERSITY.

*Trustees.*

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WILLIAM HALL RICHARDSON, M. D. Professor of Obstetrics and Diseases of Women and Children.

CHARLES WILKINS SHORT, M. D. Professor of Materia Medica and Medical Botany, and Dean of the Faculty.

JAMES BLYTHE, D. D. Professor of Chemistry.

CHARLES SHAW, M. D. Librarian of the Medical Faculty.

## GRADUATES.

*At a public commencement held in the Chapel of the University, on Tuesday, the 10th of March, 1829, the degree of Doctor of Medicine was conferred on the following gentlemen, alumni of the School, who had undergone satisfactory examinations before the Medical Faculty, Trustees, and President, and written Theses on subjects annexed to their names.*

## KENTUCKY.

	SUBJECT OF THESIS.
Robert S. Apperson, . . .	<i>Sarcocoele.</i>
John Charlton Beatty, . . .	<i>Paracyesis Abortus.</i>
Richard W. Ferguson, . . .	<i>Physiology and Pathology of the Teeth.</i>
Charles Hay, . . . . .	<i>Anatomy and Physiology of the Stomach.</i>
Henry Hopson, . . . . .	<i>Menstruation.</i>
John Terrel Lewis, . . . .	<i>Milk Sickness.</i>
Preston Lindsay, . . . . .	<i>Identity of summer, fall, and winter epidemics.</i>
Thomas J. Moore, . . . . .	<i>Erysipelas.</i>
Alexander H. Peck, . . . .	<i>Phthisis Pulmonalis.</i>
James Ritchie, . . . . .	<i>Hydrocele.</i>
Thomas Stevenson, . . . .	<i>Syphilitic and Pseudo-syphilitic affections.</i>
Robert J. Waggener, . . . .	<i>Functions of the large Intestines.</i>
Henry F. Washington, . . .	<i>Dyspepsia.</i>
Walter Carr Winter, . . . .	<i>Ophthalmia Purulenta.</i>

## MISSISSIPPI.

Charles Walton Harris, . . .	<i>Lacteal and Venous Absorption.</i>
Charles Shaw, . . . . .	<i>Nature and Treatment of Syphilis.</i>
Solomon Tracy, . . . . .	<i>Uterine Hæmorrhage.</i>
William W. Usher, . . . . .	<i>Malignant, Congestive, Bilious Fever.</i>
William Kinne Wilson, . . .	<i>Dropsy.</i>
Ellis Pusey Passmore, . . .	<i>Uterine Hæmorrhage.</i>

## ALABAMA.

William Kelsay Adams, . . .	<i>Medical Topography and Endemic Fever of Limestone county, Alabama.</i>
Richard Tucker Harper, . . .	<i>Analogy between the Liver and the Brain.</i>
Jacob Chancy Jordan, . . . .	<i>Operation of Lithotomy.</i>
Sidney Smith Prince, . . . .	<i>Medical Topography and Endemic Fever of Franklin county, Alabama.</i>
William W. Wilson, . . . . .	<i>Sleep.</i>

## TENNESSEE.

Erasmus D. Fenner, . . . . .	<i>Uterine Hæmorrhage of Pregnancy.</i>
James M'Kinney Gray, . . .	<i>Opium.</i>
John M'Call, . . . . .	<i>Purgative Medicines.</i>
Henry H. Treadway, . . . . .	<i>Syphilis.</i>

## SOUTH CAROLINA.

Archibald I. Barron, . . . . .	<i>Syphilis.</i>
Thomas Latta Dunlap, . . . .	<i>Hernia of the Abdominal Rings.</i>
Gilbert Tennent, . . . . .	<i>Medical Topography of Abbeville District, S. C. with Observations on Bilious Fever, as it occurred there in the summer of 1828.</i>
Franklin Williams, . . . . .	<i>Diet.</i>

## VIRGINIA.

William Bomar, . . . . .	<i>Hydrocele.</i>
Peter Leath Penn, . . . . .	<i>Curved Spine.</i>

## LOUISIANA.

- Owen Connelly Blount, . . *Teeth.*  
 William Henry Lyne, . . . *Bilious Fever.*

## MICHIGAN.

- Rice M'Coy, . . . . . *Actual Caustery.*  
 Josephus M'Coy, . . . . *Pathology and Medical Treatment of Calculus Affections.*

## OHIO.

- Rezin Thompson, . . . . *Digestion.*

TOTAL, 40.

C. W. SHORT, M. D. *Dean.*

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 MEDICAL COLLEGE OF SOUTH CAROLINA.

At a commencement held in Charleston, on Wednesday, March 23d, 1829, the prize of a gold medal was presented to Edwin D. Faust, M. D. for the best English thesis. An address was delivered by Thomas Y. Simons, and the degree of M. D. was conferred on the following gentlemen:—

*William N. Askew*, of South Carolina, on the *Melia azedarach* in Infantile Remittent Fever.

*Ed. H. Bond*, of Georgia, on Dysentery.

*Bryan Beddingfield*, of Georgia, on Cynanche Trachealis.

*J. P. Baird*, of Florida, on Acute Hepatitis.

*C. F. Butler*, of South Carolina, on the Circulation of the Blood.

*Elias S. Bennett*, of Charleston, on the *Chenopodium anthelminticum*.

*William M. Brailsford*, of Charleston, on the Circulation of the Blood.

*Carnot Bellinger*, of S. C. on Hernia.

*G. P. Cohen*, of Charleston, on Intermittent fever.

*C. C. Capers*, of St. Helena, on the *Gelseminum Semper Virens*.

*Isaac T. Coutrier*, of Pineville, on Worms.

*Samuel D. Carter*, of Sumpterville, on Acute Hepatitis.

*Albert T. Dozier*, of Abbeville, on the functions and sympathies of the Liver.

*Henry Dockery*, of Richmond, N. C. on the Endemic of Richmond County, N. C.

*Gibbes Elliott*, of Charleston, on the Dengue or Erupto Rheumatic Fever.

*Geo. P. Frierson*, of Charleston, Bilious Remittent Fever.

*Edwin Faust*, of Columbia, on the Chemical, Anatomical, Physiological, and Pathological relations of Fibrin.

*J. E. B. Finley*, of Charleston, on Mania a Potu.

*Alex. Gadsden*, of Charleston, on the Mutual Influence of the Mind and Body on each other.

*Arthur Gibbes*, of Charleston, on Inguinal Hernia.

*E. P. Gibert*, of Abbeville, Bilious Remittent Fever.

*Wm. D. Gourdin*, of Charleston, Sanguine Depletion.

*Robert Harllee*, of Marion, Cynanche Trachealis.

*Larkin G. Jones*, of N. C. Peculiarities of the Female.

*E. H. Kelly*, of Charleston, Empresma Hepatitis.

*Noah Lyons*, of Chester, Hepatitis.

*Thos. Lally*, of N. C. on Mercury.

*A. M'Laren*, of Abbeville, Acute Hepatitis.

*E. C. Mortimer*, of Charleston, Lues Venerea.

*Thos. Moore*, of Chester, Mania.

*Holmes Mathews*, of Edisto, Hydrocele.

*Edward North*, of Charleston, Dropsy.

*Isaac Nichols*, of Charleston, Hydrothorax.

*Joel Pearson*, of Fairfield, Acetate of Lead.

*John F. Poppenheim*, of Charleston, on Inflammation.

*Robert J. Turnbull*, of Charleston, Typhus Icterodes.

*Josiah S. Wilson*, of Geo. Ascites.



*John A. Walton*, of N. C. Functions of the Spleen.

*C. Young*, of Union, on the *Asclepias Syriaca*.

TOTAL, 39.

**COLUMBIAN COLLEGE, *District of Columbia.***

At a Medical Commencement of the Columbian College, in the District of Columbia, held March 11th, 1829, in the City of Washington, the degree of Doctor in Medicine was conferred on the following gentlemen:—

*J. Irwin Dunn*, of Washington city, on *Vermes*.

*J. B. Elliot*, of Washington city, on *Mania a Potu*.

*J. M. Higgins*, of Maryland, on *Cholera Infantum*.

*Gonsalvo Hodges*, of Maryland, on *Enteritis*.

*J. L. McWilliams*, of Maryland, on *Hæmoptysis*.

*Benjamin F. Nourse*, of Washington city, on *Variola*.

*J. M. Stewart*, of Maryland, on *Hydrocephalus*.

*A. M. Stanford*, of England, on *Dysmenorrhæa*.

*Timothy Upham*, of New Hampshire, on *Typhus Fever*.

TOTAL, 9.

The Professors of the Medical Department of the Columbian College, in the District of Columbia, anxious to extend the benefits of regular Medical education to Students whose pecuniary means will not enable them to attend courses of public lectures, have adopted the following resolutions:—

*Resolved*, That this school be open to the admission of one student of the character contemplated in the foregoing preamble, from each of the United States, and one from each of the territories, to attend all the lectures, without charge.

*Resolved*, That the senators of congress are hereby authorized to select one such student from their respective states, and the delegates of congress one such student from their respective territories, who shall be admitted to gratuitous attendance on the lectures, by exhibiting a certificate of selection from the senators or delegate, to the dean of this department. It is to be understood that said student shall pay five dollars on entering the school, as a matriculating fee, and should he graduate in this institution, a fee of twenty dollars will be required.

JAMES M. STAUGHTON, M. D. *Dean*.

*Washington City, Jan. 24, 1829.*

**PHILADELPHIA MEDICAL SOCIETY.**

*Officers for 1829.*

*President*.—PHILIP SYNG PHYSICK, M. D.

*Vice Presidents*.—JOSEPH PARRISH, M. D. SAMUEL JACKSON, M. D.

*Corresponding Secretaries*.—JOHN BELL, M. D. BENJAMIN H. COATES, M. D.

*Orator*.—BENJAMIN H. COATES, M. D.

*Curators*.—ALFRED DRAKE, M. D. THOMAS H. RITCHIE, M. D.

*Treasurer*.—D. FRANCIS CONDIE, M. D.

*Librarian*.—ALFRED DRAKE, M. D.

*Laboratory Committee*.—HUGH L. HODGE, M. D. CHARLES D. MEIGS, M. D. ROBERT M. HUSTON, M. D.

The following lectures were read before the Society during the winter session.

*Dr. Condie*. On Peritonitis, as occurring in Young Children.

- Dr. Bell.* On the origin of the Periodical Fevers of Rome and its vicinity. Communicated by Professor GIACOMO FOLCHI, of Rome.
- Dr. R. Coates.* On the connexion of certain Mechanical and Hydrostatic Phenomena with Physiology and Surgical Practice.
- Dr. Darrach.* On the Reciprocal Circulation of the Blood between the Mother and Fœtus, and the use of the Placenta.
- Dr. Rousseau.* On the management of Labour during Parturition.
- Dr. Barnes.* On Conception.
- Dr. Hodge.* A Communication from Professor QUADRI, of Naples, on Acupuncture.
- Dr. Jackson.* On the difference of action between General and Topical Depletion.
- Dr. Bell.* On Medical Creeds.
- Dr. Hodge.* On Erysipelas.
- Dr. Horner.* On the Pathology of the Nervous System.
- Dr. Meigs.* Remarks on some of Broussais' Propositions in Medicine.
- Dr. Harris.* On Asphyxia.
- Dr. Beattie.* On the Use and Abuse of the Forceps in Obstetrical Practice.
- Dr. Rousseau.* On Hydrophobia.
- Dr. Condie.* On Hæmatemesis.

The following gentlemen were elected honorary members of the Society.

Dr. Sacco, of Milan; Professor Giacomo Folchi, of Rome; Professor Quadri, of Naples; Professor Mojon, of Genoa; Dr. Chauffard, of Avignon; Professor J. D. Carns, of Liepsic; Dr. A. N. Gendrin of Paris; Dr. Bournonville, of Philadelphia.

The following gentlemen were admitted as junior members.

*Pennsylvania.*—Robert H. Jones; J. F. Bullock; Joseph Baldwin; William N. Johnson; John Perdui; Samuel Abernethy; Obed Bailey; J. Meckley; Simon A. Wicks; Elijah Griffiths; George W. Norris; James M'Clintock; John R. Taggart; Dr. Erasmus Thomas.

*New Jersey.*—Dr. John R. Sickler; William P. Garrison; Charles Sartori.

*Maryland.*—Lyttleton M. Robertson.

*Virginia.*—J. N. Powell; Singleton J. Cooke; William Pettit.

*Ohio.*—Gustavus Allen; Edson B. Olds; Edward Thompson; Joab Wright.

*South Carolina.*—William G. Adams.

*Louisiana.*—F. N. Ogden; Dr. Edward Chew; Augustus H. Cenas.

*Trinidad de Cuba.*—Joseph M. Urquiola.

From the Records of the Society,

ROBERT M. DUNBAR,  
Recording Secretary.

#### PHILADELPHIA VACCINE INSTITUTION,

Established in the year 1822, with the approbation of Professors PHYSICK, CHAPMAN, JAMES, GIBSON, and COXE, Doctors HARTSHORNE, HEWSON, MONGES, &c. &c.

The subscribers to the above Institution, those practitioners who have for the last eleven years obtained their supplies of vaccine virus from the undersigned, and the profession generally throughout the United States, are respectfully informed, that applications for vaccine virus will be attended to as usual, at all seasons of the year, and at one day's notice, by the undersigned,

JOSEPH G. NANCREDE, M. D.

*S. E. corner of Tenth and Walnut streets, Philadelphia.*

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THE  
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- JOHN D. GODMAN**, M. D. *late Professor of Anatomy and Physiology in Rutgers Medical College, New York.*
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- ANSEL W. IVES**, M. D. *of New York.*
- SAMUEL JACKSON**, M. D. *Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.*
- SAMUEL JACKSON**, M. D. *of Northumberland, Pennsylvania.*
- W. J. MACNEVEN**, M. D. *Professor of Therapeutics and Materia Medica in Rutgers Medical College, New York.*
- C. B. MATTHEWS**, M. D. *of Philadelphia.*
- VALENTINE MOTT**, M. D. *Professor of Surgery in Rutgers Medical College, New York.*
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- REUBEN D. MUSSEY**, M. D. *Professor of Anatomy and Surgery in Dartmouth College.*
- JAMES M. PENDLETON**, M. D. *Lecturer on Midwifery and Diseases of Women and Children, New York.*
- PHILIP SYNG PHYSICK**, M. D. *Professor of Anatomy in the University of Pennsylvania.*
- NATHANIEL POTTER**, M. D. *Professor of the Theory and Practice of Medicine in the University of Maryland.*
- THOMAS SEWALL**, M. D. *Professor of Anatomy and Physiology in the Columbian College, District of Columbia.*
- JOHN WARE**, M. D. *of Boston.*
- JOHN C. WARREN**, M. D. *Professor of Anatomy and Surgery in Harvard University, Boston.*
- J. WEBSTER**, M. D. *Lecturer on Anatomy and Surgery, Philadelphia.*
- N. W. WORTHINGTON**, M. D. *Professor of Materia Medica in the Columbian College, District of Columbia.*
- THOMAS H. WRIGHT**, M. D. *Physician to the Baltimore Alms-House Infirmary.*

## TO READERS AND CORRESPONDENTS.

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Communications have been received from Professors MUSSEY and HORNER, and from Drs. MICHOLS, of Cumberland County, Maine; JACKSON, of Northumberland County, Pennsylvania; and HENDERSON, of Huntingdon County, Pennsylvania.

Dr. RANDOLPH's case of excision of the lower jaw, will appear in our next, with a plate.

We have received the following works:—

Traité Général d'Anatomic Comparée: Par J. F. MECKEL, traduit de l'Allemand et augmenté de notes, par MM. RIESTER et ALPH. SANSON, D. M. P. Tome troisième. 1re Partie. Paris, 1829, (from the publishers.)

Cours de Physiologie Générale et Comparée Professé à la Faculté des Sciences de Paris. Par M. DUCROTAY DE BLAINVILLE, Membre de l'Institut. Publié par les soins de M. le Docteur HOLLARD, et revue par l'auteur. Livraison 1re et 2<sup>e</sup>, (from the publishers.)

Napoléon a Sainte-Hélène. Opinion d'un Médecin sur la Maladie de l'Empereur Napoléon et sur la Cause de sa Mort; offerte a son fils au jour de sa majorité. Par J. Héreau, ancien Chirurgien ordinaire de Madame Mère, et premier chirurgien de l'Impératrice Marie-Louise. Paris, 1829, (from the author.)

Journal des Progrès des Sciences et Institutions Médicales en Europe en Amérique, &c. Vol. XIII, (in exchange.)

Annales de la Médecine Physiologique, October, 1828, and January, February, March, 1829, (in exchange.)

Revue Médicale, November, 1828, (in exchange.)

Bulletin des Sciences Médicales, October, 1828, (in exchange.)

Journal Universel, November, 1828, January, February, March, April, 1829, (in exchange.)

Journal Général de Médecine, December, 1828, January, February, March, April, 1829, (in exchange.)

Nouvelle Bibliothèque Médicale, January, February, 1829, (in exchange.)

Archives Générales de Médecine, February, March, April, 1829, (in exchange.)

Journal der Chirurgie und Augen Heilkunde, herausgegeben von C. F. V. GRAEFE und Ph. V. WALTHER. Band. XII. Stück 1, 2, 3, (in exchange.)

*Litterarische Annalen der Gesammten Heilkunde.* Herausgegeben von Dr. J. F. C. HECKER. December, 1828, and January, February, 1829, (in exchange.)

*Gemeinsame deutsche Zeitschrift für Geburtskunde.* Herausgegeben durch D. W. H. BUSCH, L. MENDE, und F. A. RITGEN. Band III. Heft 3, und Band IV. Heft 1, (in exchange.)

*Notizen aus dem Gebiete der Natur und Heilkunde* gesammelt und mitgetheilt. Von LUDWIG, FR. VON FRORIEP, August to December, 1828, and January to March, 1829.

*The Medico-Chirurgical Review*, for April, 1829, (in exchange.)

*The London Medical and Surgical Journal*, April, May, June, 1829, (in exchange.)

*The London Medical and Physical Journal*, March, April, May, June, 1829, (in exchange.)

*The London Medical Gazette*, March, April, May, 1829, (in exchange.)

*Boston Medical and Surgical Journal*, Vol. II. Nos. 10 to 21, inclusive, (in exchange.)

*The Transylvania Journal of Medicine*, and the *Associate Sciences*, May, 1829, (in exchange.)

*The North American Medical and Surgical Journal*, July, 1829, (in exchange.)

*The New York Medical and Physical Journal*, April, 1829, (in exchange.)

For the gratification of our contributors we continue the references to the works, in which they will find notices of their communications; these references are, of course, restricted to the Journals received during the preceding three months.

Professor PHYSICK's Case of Cough from Elongation of the Uvula is noticed in the *London Medical and Physical Journal*, for June, 1829.

Professor CHAPMAN's paper on Emetics in Hæmorrhage is copied into the *London Medical and Surgical Journal*, for April, 1829.

Professor MOTT's Case of Calcareous Degeneration of the Scrotum is noticed in the *Archives Générales*, for February, 1829; and his Case of Excision of an Osteo-Sarcomatous Clavicle in the *Medico-Chirurgical Review*, for April, 1829, the *London Medical Gazette*, for February, 1829, and Froriep's *Notizen*, for December, 1828.

Professor DEWEES's paper on Ergot is noticed in the *Archives Générales*, for May, 1829.

Professor GIBSON's Case of Axillary Aneurism is noticed in the *London Medical and Physical Journal*, for April, 1829, and Froriep's *Notizen*, for Dec. 1828.

Dr. JACKSON's Case of Amnesia is copied into the *London Medical and Surgical Journal*, for June, 1829.



Dr. STEDMAN's Case of Bleeding in the Radial Artery in a case of Apoplexy is noticed in the *Annaire Medico-Chirurgicale*, for 1827.

Dr. MITCHELL's Experiments on the Corpora Lutea are noticed in the *Archives Générales*, for February, 1829.

Dr. PENNOCK's Experiments on the Effect of Cupping-glasses in Poisoned Wounds are noticed in the *Archives Générales*, for February, 1829.

Dr. MAURAN's Case of Malformation of the Heart is noticed in the *Archives Générales*, for February, 1829.

Dr. DRAKE's Experiments on the Respiration of Cool air in Pulmonary Diseases are analyzed in the *Medico-Chirurgical Review*, for April, 1829, and *Froriep's Notizen*, for January, 1829.

Dr. HEISKELL's Case of Extra-Uterine Fœtation is copied into the *Nouvelle Bibliothèque Médicale*, for January, 1829.

Dr. LEVERT's Experiments on Metallic Ligatures are noticed in the *Boston Medical and Surgical Journal*, for June, 1829.

Dr. WASHINGTON's Case of Gunshot Wound is copied into *Froriep's Notizen*, for August, 1828.

Authors of new medical books, desirous of having them reviewed or noticed in this Journal at the earliest opportunity, are invited to transmit to the Editors a copy as soon after publication as convenient, when they will receive prompt attention. Under ordinary circumstances, very considerable delay is caused by the circuitous routes through which they are received.

Papers intended for publication, should be sent, *free of expense*, as early after the appearance of the Journal as possible, in order to be in time for the ensuing number. Such communications should be addressed to "CAREY, LEA & CAREY, Philadelphia, for the Editors of the American Journal of the Medical Sciences." All letters on the *business* of the Journal to be addressed exclusively to the publishers.



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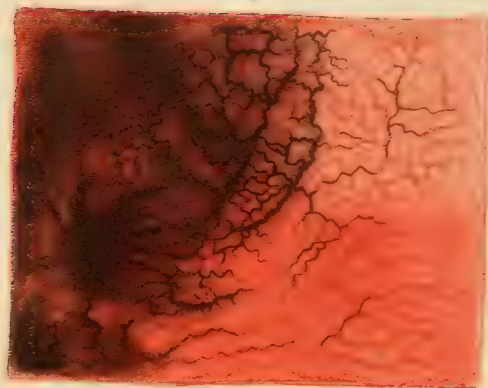
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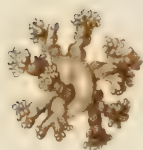
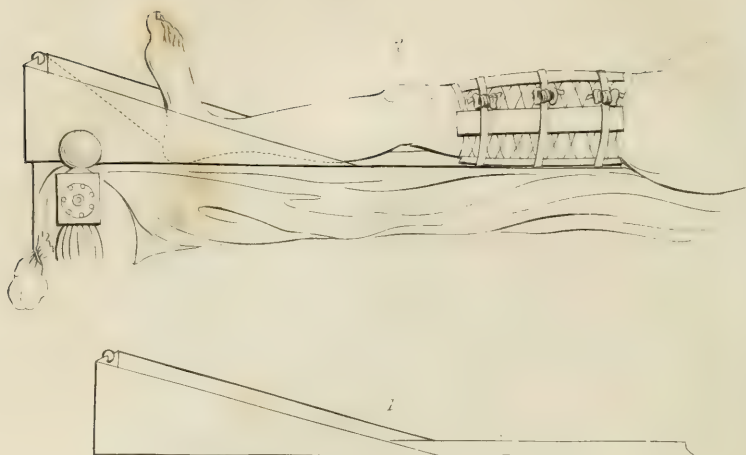






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THE  
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MEDICAL SCIENCES.

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ART. I. *On the Means of affording Respiration to Children in Reversed Presentations.* By JACOB BIGELOW, M. D. Professor of Materia Medica in Harvard University.

IT is familiar to obstetric practitioners, and is noticed by most writers on midwifery, that in those cases of labour in which the body of the child is delivered before the head, a considerable degree of danger exists in regard to the life of the child. Rules for the conduct of such cases are laid down by writers, yet it cannot be denied that, in the hands even of skilful practitioners, many children which are alive when the body is expelled, are irrecoverably lost before the head can be extracted. In these cases death takes place because the connexion with the mother is interrupted, by compression of the cord, or detachment of the placenta, before a communication with the atmosphere is effected.

It is the object of the present paper to show, that in many such cases the life of the child may be saved, by forming a communication between the mouth and the atmosphere, previous to the delivery of the head.

After the body is expelled, if the head can be seasonably delivered, either by the recurrence of pains, or by the successful efforts of the practitioner, no difficulty ordinarily occurs. But this desirable state of things cannot always be realized. Too frequently the size of the head, and the resistance of the pelvis or soft parts, renders the delivery difficult and hazardous, and the practitioner in the midst of his efforts, is apprised by a convulsive jerk or spring of the body, that a state of extreme danger exists, and that the time has come at which the child must breathe or will speedily die. If at this period the fingers be introduced, so as to reach the mouth of the child, it

will be perceived that each jerk of the body is attended with a gasp, and convulsive effort at inspiration, performed by the mouth and chest of the child. In this state of things, if air be conveyed to the mouth of the child it will immediately breathe, and the efforts of nature, as will hereafter be shown, may in most cases be safely waited for to assist in expelling the head.

The method to be pursued in conveying air to the mouth, depends upon the situation of the head. If the chin has descended low in the pelvis, so that the mouth rests upon the perinæum or lower part of the sacrum, and can be readily reached by the fingers, the hand of the operator alone is sufficient to give the assistance required. But if the mouth is situated so high in the pelvis as to be reached with difficulty, or if, from the large relative size of the head, there is much compression, the assistance of a tube may be of use. The mode of proceeding which I have found successful in various instances is as follows: as soon as the body and arms are extracted, supposing the face towards the sacrum, an assistant supports the body, carrying it towards the pubis; or the reverse, should the position of the face be to the pubis. The accoucheur should then introduce the hand to which the face looks, till the middle fingers rest upon the mouth of the child. The hand is then to be raised from the throat of the child, making the ends of the fingers a fulcrum, and pushing the perinæum backwards. The air will thus pass upwards as far as the chin of the child. The middle fingers are now to be separated about half an inch from each other, and thus a complete passage will be formed between them, by which the air will reach the mouth of the child. If the child be in a healthy state up to this period, it will immediately breathe and cry, and the delivery of the head may be safely postponed until the natural pains recur. If, from any degree of asphyxia, the child does not immediately breathe, it may often be made to do so by dashing cold water upon the body, or by other stimulating processes. It has even appeared to me practicable to inflate the lungs, in some cases, through an elastic catheter. When the mouth is so high in the pelvis as to be reached with difficulty, or when the compression is so great as to obliterate the cavity between the fingers, a flat tube will be found useful, made of metal, of spiral wire covered with leather, or of elastic gum, and having its largest diameter about half an inch. If the tube be of metal, or of any incompressible material, it should be withdrawn during a pain, to prevent contusion of the soft parts, and immediately replaced, if the pain subsides without expelling the head. Such a tube may be considered as a prolongation of the trachea, and is fully sufficient to sustain life by respiration for

a considerable time. The tube must be guarded and directed by keeping it between the fingers of the inserted hand.

The following are a part of the cases which have occurred to me in practice, affording an opportunity for the trial of this method.

CASE I.—A patient was in labour with her second child, August 8th, 1824. The case was one of breech presentation, and without any unusual occurrence the body and arms were delivered in about three hours after my arrival. The position of the head was of the most common kind, with the vertex above the pubis, and the face in the lower part of the hollow of the sacrum. At this time my left hand was passed upward, with a view of depressing the chin, but the child being large, it required some effort to reach the mouth with the fingers. The time consumed in doing this was too great for the safety of the child, and the convulsive spring of the body took place. I was forcibly struck at the same moment by perceiving a gasp of the mouth at the ends of my fingers, and the idea occurred that if a communication could be made to the atmosphere, the child would respire. Attempts were made without success to extract the head by a moderate force, aided by the efforts of the mother and by pressure made by an assistant over the fundus of the womb. At the same time the hand which rested over the mouth and throat was raised a little, and the fingers opened to give passage to the air. The child soon gave another convulsive spring, and at the same moment inspired. The hand being retained in the same position, a slow, but constant respiration continued, accompanied with a low, moaning cry, for eight or ten minutes, when the recurrence of a pain caused the head to be delivered. During the whole of this period before the final pain, the mouth was several inches within the perinæum.

CASE II.—This case occurred May 1st, 1826, and was also a breech case. Being a first labour, it was protracted for eighteen hours. After the presentation was ascertained, I had made, in a hasty manner, a tube about five inches long and half an inch wide, slightly flattened, and slightly bent over at its extremity. The case being one of more than common interest, I provided myself likewise with forceps. Although the mother had been in perfect health, yet the body of the child when expelled, was found emaciated and dark coloured, exhibiting marks of feeble life. As much force as it was thought justifiable to use, was employed to extract the head, with no other effect than to bring the mouth within about two inches of the edge of the perinæum. The tube was now introduced and placed in the mouth of the child, but it did not respire. It will be observed that the child had exhibited no convulsive effort, nor any signs of



being alive. An attempt was now made to inflate the lungs, which failed, apparently from want of tightness in the tube, the joining not having been soldered. It nevertheless appeared to me practicable to have inflated the lungs in this situation, with a suitable tube, since the tightness with which the perinæum covers the face would assist in preventing regurgitation of the air. The foregoing attempts having proved unavailing, the forceps were introduced, with the aid of which the head was extracted. The child was resuscitated with great difficulty, and did not breathe spontaneously, until artificial respiration had been kept up, by inflating the lungs through a quill, for more than half an hour. It was two hours before the respiration became so perfect that the child could be left to itself. I have no doubt that this child would have respired before the birth of the head, had there been sufficient constitutional vigour to produce the effort.

CASE III. *March 29th, 1827.*—This patient had had five children. In her sixth labour the presenting part was found to be the arm. The pelvis being large, and the parts dilatable, no difficulty occurred at the proper time in introducing the hand, rupturing the membranes, and finding the feet, which were brought down and the body delivered. The face turned towards the perinæum, the mouth was easily reached, and the fingers were opened to give passage to the air as before described. No struggle nor attempt at inspiration, however, occurred. A handful of cold water was then dashed upon the body, upon which the child immediately gave a spring and began to cry. The head was not delivered until some minutes afterwards.

CASE IV.—In a case of twins, January 29th, 1829, the first child presented the nates, and was born with the face to the sacrum. After the delivery of the body, the fingers were passed up to the mouth of the child, and opened to give passage to the air. As in former cases the child began to cry in a low voice, with slow respiration, the mouth being two or three inches within the perinæum. Feeling secure in regard to the life of the child, I determined in this instance, to use no extractive effort, but to wait for the expulsive action of the uterus. In the mean time I called the attention of the females who were present, to the crying of the child, which continued without interruption, though the head and neck were buried in the pelvis. In a few minutes an expulsive pain threw out the head with very little assistance on my part. The presentation of the second twin was natural.

CASE V.—This occurred in the same patient as Case III. In this labour the presenting parts were the breech and left hand. After the birth of the body the face was found so strongly pressed against the

sacrum, as to render it difficult to form a passage for the air. By a gentle extractive force, the head was made to descend lower in the pelvis, and a tube was placed in the mouth. The child in this situation respired, and after a few minutes, with the assistance of a pain, the head was easily extracted.

The foregoing practice is not new, though it appears to have been lost sight of by most of the later writers on midwifery. I am not aware that it is mentioned by SMELLIE, DENMAN, HAMILTON, BURNS, or DEWEES. MERRIMAN alludes to it as a thing which is possible, but does not speak experimentally on the subject. In one of the older writers, however, a practice nearly similar is described, and warmly recommended from the author's experience. In PUGH's *Treatise of Midwifery*, published in 1754, are the following instructions:—

“The arms being brought down, the head only remains to be extracted, which must be done with as much expedition as possible, as indeed the arms ought to be; for when the child has passed the navel, the circulation between it and the mother is stopped, from the pressure of the umbilical rope. You must then introduce the fingers of your left hand into the vagina, under the child's breast, and put the first and second fingers into the child's mouth pretty far, so far however, that you are able to press down the child's tongue in such a manner that by keeping your hand hollow, and pressing it upon the mother's rectum, the air may have access to the larynx, you will soon perceive the thorax expand, as the air gets into the lungs. Many authors make very little trouble in extracting the head, but without a well formed pelvis, every operator must know there is difficulty and great danger of losing the child by its stay in the passage; but by this method of giving the child air, I have saved great numbers of childrens lives, which otherwise must have died.”

“Before I made use of this method, and pressing externally to assist in extracting the head, I found many children were lost in this situation for want of air, which put me upon inventions; as likewise a third, which was a curved flatfish pipe, as likewise a flexible one, that I introduced into the child's mouth as near to the larynx as I could, the other end external, which I found answer, but now as I find my fingers generally answer, I seldom make use of it.” Page 49-50.

The foregoing practice of Pugh is virtually the same to which I had resorted before meeting with his book. That part of his directions, which relates to introducing the fingers into the child's mouth, and pressing down the tongue, appears superfluous; for if the air is carried as far as the child's lips, it will enter the lungs whenever the child makes a natural effort to inspire, and without this effort, the practice will be unavailing.

I am aware that it is a prevailing opinion, sanctioned by the authority of respectable writers, that when the face is upon the lower

part of the sacrum or upon the perinæum, the head is wholly in the vagina, and that therefore no farther aid is to be expected from the efforts of the uterus in promoting its expulsion. This I take to be an erroneous view of the subject. After the body is expelled from the womb, its remaining contents are the head and the placenta. These constitute a collective mass, upon which the uterus may continue to act, as long as either of them is contained in its cavity. The head, therefore, whether partly in the uterus, or wholly in the vagina, is subject to be acted upon through the placenta, and I have little doubt, that in all common cases, it would sooner or later be expelled by the uterine efforts alone. Of the fact that expulsive pains acting upon the head, do occur in these cases, my own experience does not permit a moment's doubt. The same fact I have also found to be confirmed by the observations of several of my medical brethren. And I think every accoucheur of experience must have remarked, that there are times, when the safe extraction of the head, by external force, is difficult and even impracticable, while at others, under similar circumstances of size and position, it is perfectly easy, owing doubtless to the co-operative efforts of the womb.

That the extraction of the head by external force alone, acting through the neck, is not always an easy, or a safe operation, we may conclude from the cautious manner with which writers speak upon the subject, and from the known fact, that many children die after the body is delivered. It is true that multitudes of successful cases occur, and it is these chiefly which are published, while those of the opposite kind are consigned to oblivion. It appears probable, that the successful cases are those, in which a favourable proportion exists between the head and pelvis, or in which the efforts of the operator are seconded by uterine pains.

The course of proceeding which appears to me most likely to preserve the life of the child in these cases, is as follows. As soon as the body is delivered, the patient being on her back, the body of the child is to be supported by the right hand of the operator, or by an assistant, while the fingers of the left hand are introduced to search for the mouth. A passage for the air to the mouth is to be formed by raising the perinæum from the face, and opening the fingers in the manner already described. If the child inspires, it may be considered safe, and while the respiration continues, no other care is necessary than to support the body in a favourable position, and to keep the passage unobstructed till the pains return. In the meantime, the patient may be encouraged to exert herself at intervals, in voluntary efforts, and at the same time, an assistant should press and rub with



some force upon the fundus of the womb, with a view to excite contraction.\* When any expulsive effort occurs, it is to be seconded by the practitioner by extracting, and the head will in general be delivered without violence or danger.

When it happens that the child does not spring, and makes no effort to breathe after air is conveyed to the mouth, attempts should be made to resuscitate it by dashing a handful of cold water on the body, and by rubbing the back and lower extremities, and striking them with the hand. This will be likely to excite inspiration, and the rest of the case may be conducted as before: or an elastic tube may be placed in the mouth or nostril, and an attempt made to inflate the lungs, the perinæum in the meantime being pressed closely to the face. But in general, if the child does not respire soon after the air is conveyed to it, it is owing either to a defect of constitutional vigour or excitability, or to the unfavourable circumstances of the labour, and in this case no time should be lost in extracting the head, by the neck, or by the forceps, according to the rules laid down for these cases by obstetrical writers.

ART. II. *Notice of an Epidemic that prevailed in Savannah, Georgia, during the Summers of 1826 and 1828.* By W. C. DANIELL, M. D. of Savannah, Georgia.

IN the month of August, 1826, a fever made its appearance in Savannah, from which very few escaped. I am inclined to the belief, that this was the same disease with the Dengue, which prevailed so extensively the last season, in Charleston, this place, and elsewhere. It is certainly true that the same consequences did not follow the former, that attended upon the latter. This, however, may, I think, be accounted for, without violating the presumption that the two diseases are identically the same. The severity of the pains which attended upon the fever of 1826, induced the sufferers, who believed the danger proportioned to the degree of suffering they endured, to invoke the early aid of the profession; and the symptoms prompted the physicians to an energetic treatment.

The revulsive and tonic treatment of fever, which has been adopt-

\* Pressing and rubbing upon the fundus of the womb has always appeared to me one of the most powerful means of exciting the contraction of that organ in cases of flooding, and of retained placenta.

ed amongst us, was well adapted to the cure of the prevailing epidemic of 1826. The eruptions were brought out and fixed upon the surface early in the disease, by the use of mustard plasters. The administration of serpentaria, (Virg.) and bark or quinine, kept up a moisture upon the surface, and gave tone to the system. Hence no unpleasant consequence followed the disease.

Before the reappearance of this fever in the summer of 1828, when it bore the name of Dengue, our people, by public report, had been taught to view it as a new disease, with which physicians were not acquainted, and when attacked with it, for the most part, merely resorted to some palliative for a pressing symptom. The physicians, generally disposed to associate a new remedy with a new name of disease, treated their patients without system, and consequently without success.

My own observation sustains me fully in the remark, that the Dengue of 1828, was as manageable as the Break-bone fever, (as it was called,) of 1826, in which latter not a death is recollected to have occurred.

It is not my intention to detail the symptoms of the Dengue, as they have repeatedly been described. In the fifth number of this Journal will be found an article upon this disease, containing an account of the symptoms, by Dr. DICKSON, of Charleston. It is true that the writer does not discriminate between the symptoms that characterized the disease, and those that were the result of injudicious treatment. If my own views of the Dengue be correct, and if I am successful in giving an exposition of them, the judicious reader will readily perceive what symptoms were appropriate to the disease, and what were superinduced by the absence of all remedies, or their injudicious application.

The Dengue is certainly an exanthematic fever. At an early period, an eruption invariably appears in some part of the body, unless prevented by active purging, bleeding, or some other injudicious prescription. Upon fixing and maintaining this eruption on the surface, and allowing it gradually to pass off by perspiration, depends the radical cure of the disease.

As just stated, my great object in treating Dengue was to fix the disease upon the surface. To this end, upon visiting a patient labouring under it, and especially in the first stages of the disease, I directed a mustard plaster to be placed on the abdomen to inflame the skin.\* If the eruption had previously existed, this increased it, or in its ab-

\* See my treatise on Autumnal Fevers, pp. 103, 4, and 5.

sence produced it. In some cases additional plasters of the same article were placed on the extremities. Whenever the eruptions were fully established on the surface, the pains of the different parts of the frame were removed.

If circumstances indicated their use, castor oil, or some mild laxative was given, to obviate or remove costiveness.

The eruptions having been fixed on the surface, serpentaria, and bark or quinine were given, until the fever subsided, which was commonly from two to four and five days. After that, the serpentaria was given alone for six or eight days, by which a constant and gentle moisture was maintained on the surface. During this latter period, animal food, porter, or wine, were given the patient in small quantities. Under the above briefly recited treatment, the eruptions gradually passed off, (usually before the fever,) and the patient was restored to health, without being subjected to the usual consequences of the disease, as pains in the limbs, swellings and stiffness of the joints, which appeared to run on for months, and afterwards might be renewed by any slight exposure.

When the skin has been inflamed, the eruptions increase, and in many instances run into each other, producing the appearance of a deep blush over the whole face, neck, and breast. When a moisture has been produced to some extent, there is an abatement in the deep colour of the eruption. This eruption, as before remarked, gradually subsides. In the communication of Dr. Dickson above referred to, he observes, that "the patient was liable to a second, third, and indeed indefinite number of returns of the disease, or relapses, as they were called, while such as were properly covered with the eruption about the sixth day, were protected from any future attack. To this rule there was no exception in my practice, as I may confidently assert after particular attention to the matter." pp. 11-12.

Where the eruption has been regarded as an accidental symptom, and allowed to disappear, or where it has been repelled or prevented from appearing, by the use of purges, the lancet, antimonials, &c. almost every part of the system is liable to be attacked. Several cases of mania, consequent upon repelled eruptions, occurred within my observation. Dr. FOSKMAN informed me of another, in his own practice. In a lady it produced an inability to retain her urine. The most singular consequence which I witnessed, however, as resulting from repelled eruptions, was a case of general tetanus, which terminated fatally.

I am anxious to impress fully on the mind of the reader, the great importance of keeping up a gentle perspiration for six or eight



days after the disappearance of all the symptoms of the disease, by the use of an infusion of serpentaria. Upon patients who refused to submit to this additional treatment, the pain, &c. have returned, and in many instances have produced much suffering and even lameness.

The acute stage of Dengue is, in its effects upon the system of the patient, of but little importance when compared with the chronic stage—or to speak more correctly, the stage consequent upon the repelled eruptions. How long this latter may continue, it is impossible yet to say, as some are still suffering from injudiciously treated or neglected cases of Dengue, which occurred the last summer.

I have derived but little satisfaction, from any method which I have been enabled to devise for the treatment of chronic Dengue. Some relief has been afforded, and it is believed a few cases were cured, by bathing the affected members in cold water saturated with salt, and afterwards using frictions with a flesh-brush or coarse napkin, until perspiration was produced. It was necessary to continue this treatment for eight or ten days. In other instances, however, it has wholly failed.

*Savannah, May, 1829.*

ART. III. *Case of Acute Gastritis, supervening upon Chronic, arising from Intemperance, and attended with Arachnitis of the Cerebrum.*

By W. E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania. [With a plate.]

**WILLIAM C.** aged forty-three, innkeeper, has used alcoholic drinks in excess for the last eight or ten years, and become much enfeebled from them. The last summer he had a severe dysentery which lasted several weeks.

*Nov. 22d, 1827.*—I visited him for the first time.

*Habitude.*—Not much emaciated, skin pallid and temperate.

*Countenance.*—Dull and unmeaning.

*Intellectual Functions.*—Disposed to taciturnity, and dull in apprehension.

*Sensitive Apparatus.*—Hearing dull.

*Respiration and Circulation.*—Natural.

*Locomotive Apparatus.*—Very much enfeebled, scarcely able to walk.

*Digestive Apparatus.*—No appetite.

He did not complain of pain in any particular part. Ordered valerian tea.

*November 25th.*—I visited him again, and found him labouring under hallucinations, of which he was sensible; for he observed that though the figures were before his eyes, yet he knew they were deceptive. He complained also of pain in the epigastrium, and suffered from a retention of urine. The muscles of the abdomen were rigid, and drawn towards the spine. He had spent several nights without sleeping. Ordered opium two grains, and camphor one grain, to be made into a pill, and repeated every three hours till sleep be procured. Four of these pills produced the desired effect, and he slept soundly the following night.

The next day forty leeches were applied to the epigastrium with much advantage in diminishing the pain there, and two days afterwards a blister was put upon the same region.

*December 1st.*—His speech became suspended; great tenderness occurred in the abdomen, and the most excruciating pain in the lower extremities upon their being moved. His tongue became covered with a thick yellow coat, and his strength exceedingly prostrated. Volatile alkali was administered in a julep to the amount of five grains every two hours. He took several doses of it, and the next day I found that the moisture of the tongue had disappeared, and the yellow coat had dried up into a dark brown one. In the further progress of his treatment up to the day of his death, a mild cathartic was administered on three or four occasions, also a decoction of serpentaria and bark at intervals. His nourishment was wine whey, arrow root, and such light articles as he could be induced to swallow.

It was attempted twice to leech him on the head, but the leeches refused to bite; he was then cupped on the temples. He was also cupped along the spine, half a dozen cups on each side; and had mustard poultices applied to his ankles. He sunk gradually, and died this morning, December 7th, at four o'clock. From the day on which the retention of urine first occurred till the day of his death, the bladder continued paralytic, and an extremely fœtid, dark urine was daily brought off by the catheter. Also, for several days before death, he was incapable of moving the lower extremities, notwithstanding their extreme sensibility to the touch.

*Autopsy.* Twelve hours after death.

*Head.*—Very strong adhesion of dura mater to bone. In attempting to remove the latter, several drachms of serum were lost, which were supposed to come from beneath the tunica arachnoidea. The latter was turbid, and raised in vesications.

Blood-vessels of pia mater very turgid, as also those in the cerebrum;

the latter on being cut into, bled freely, and much serum exuded from it. Cerebellum soft; adhesion between thalami unusually strong; a cluster of transparent vesicles on each side of plexus choroides; blood-vessels of velum very turgid. Spinal marrow, veins on surface very turgid; very great vascular fulness internally, giving a red pink colour along the roots of the anterior fasciculi of nerves where they came from within the medulla spinalis. Spinal marrow not so vascular along the roots of posterior fasciculi, but still having a superabundance of blood.

**Thorax.**—Ancient universal pleuritic adhesion on both sides; lungs healthy; heart healthy, its blood not coagulated.

**Abdomen.**—No peritoneal disease.

Stomach universally inflamed, and within of a deep pink colour, not coming from extravasation as in fever, but from the immense number and the fulness of its veins, which ran along the surface of the internal coat. At many places their capillaries were so numerous as to look at a little distance like small spots of extravasation, which, however, with the aid of a microscope were found to be congeries of very fine vessels. Near the cardiac orifice there was a round patch, two or two and a half inches in diameter, consisting of thickly interwoven veins, containing black blood, and looking as if they were varicose; they were on the internal surface of the mucous membrane. In the pyloric region were two reddish slate-coloured patches, the indications of a chronic irritation there, and about twenty-four lines in diameter. Pylorus thickened; stomach small; scarcely any gas in the bowels.

Mucous coat of duodenum and jejunum inflamed to almost the same red colour with that of the stomach; ileum and colon of a bright pink colour internally; no ulceration of intestines; colon contained some well-elaborated fæces.

Liver common size, degenerated into a drab colour, hard, diminished vascularity; acini consisted in little hard scirrhus-like grains. The secretion of bile seemed to have been suspended, for the gall-bladder contained only a little black-coloured mucus.

Pancreas healthy; spleen healthy; kidneys healthy. Mucous coat of bladder inflamed, being injected with a net-work of veins, large and small, which were particularly abundant about the neck.

This patient had a mortification of the size of a dollar, from pressure on sacrum. On cutting into it, as it was in the early stage, the blood was identified with the cellular substance and skin, so that it all looked like a bruise.

Plate III. fig. 1. patch from the cardiac portion of the stomach; fig. 2. patch from the pyloric portion of the stomach.



ART. IV. *Observations on Entropion, with a Case.* By SAMUEL JACKSON, M. D. of Northumberland.

THE various methods which have been practised for the cure of this troublesome affection are difficult or painful; that of SAUNDERS and DORSEY is followed by permanent deformity; and all of them are nearly impossible to perform on children. If the operation I have found successful in one instance, prove applicable to every tenth case, it will not be considered unworthy of public attention.

One of my daughters, about three years old, was attacked with conjunctivitis, without any evident cause, in May, 1828; and as the disease was mild it was too much neglected at the onset. About the 1st of June she was sent to a dark room and confined there nearly ten months. During the first six of these months she had varicella, bilious fever, and frequent attacks of intermittent, all which fell upon her eyes, and aggravated the disease, so that by November the palpebræ were so much swollen that the eyes could not be seen, and the retina so sensible that she could not tolerate light sufficient to enable us to see any object, on first entering her apartment. In this state of things she found no comfort but in riding round the nursery in her wagon, with her face buried in a pillow. This indeed was her almost steady occupation, day after day, and from morning till night, for many months; nay, it was often necessary to rise in the night and give her this only comfort.

She was so irritable and unmanageable that nothing could be steadily applied to the eyes with any advantage; nothing could be effected with leeches, owing to the circumstance of her having been excessively alarmed with an attempt to apply some in the early stage of her complaint. It is not necessary to detail the particulars of the treatment, but a few of the more prominent facts I will detail.

Blisters to the nucha and behind the ears were of no service during any stage of the disease, and one at the insertion of the deltoid, three inches square, kept running profusely with savin cerate for six weeks, was utterly useless; but when applied near the eyes, they never failed to do good, and when drawn over the whole forehead at once, they sometimes reduced the photophobia so suddenly that she would cry out during the drawing of them, that it was too dark, she could not see. At length, by continual repetition of the blisters to her forehead and temples, not over the eyes, the swelling of the palpebræ gradually lessened, and the intolerance of light also; she began to play about the dark room, and to amuse herself with a swing.

In this state of things the disease assumed in some measure an intermittent form. When running round the room with the greatest hilarity, she would suddenly throw herself on the floor, with her face in her hands, and cry most piteously that her eyes hurt; her wagon was then demanded, and after riding three or four hours in sullen silence, her face buried in a pillow, a softness and moisture of the whole surface came on, when she would resume her cheerfulness and play about in the dark till bed-time. About the same hour on the following day, a similar scene was to be acted, though sometimes the paroxysms came on earlier, sometimes later, and not unfrequently they passed over one, two, or three days. We had reason to believe they were preceded by a slight chill, they were certainly attended with an acceleration of the pulse, and they always went off with a softness of the skin. An attempt was made to cure them with quinine, but it failed entirely, and so did the prussiate of iron. Fowler's solution of arsenic was then tried in doses of five drops, four, five, and six times a day, and before she had taken it five days the paroxysms were checked, and the patient bore more light than she had done for eight months. This poison was then omitted, and the blisters were continued to her temples and forehead; the photophobia became every day less, till within three weeks from the time the arsenic was first used, she could bear as much light as would enable us to read large print with some difficulty.

The paroxysms now returned precisely like the first, but the arsenic or Fowler's solution removed them entirely and finally in four days; and by continual blistering, with gradually increasing the light, she was able, with the use of a green veil, to bear the full blaze of day by the first of April. One eye was now entirely well, but the other was found to be affected with entropion of the lower palpebra. The whole tarsus was turned under the eyeball, so as to present a smooth rounded contour, as represented in M. DEMOURS' eighteenth plate. We made several attempts to pull down the lid and extricate the tarsus, but so violent was the action of the muscles that we utterly failed; therefore, as the eye was constantly improving we desisted from any further attempt, with the hope that the new cilia had not grown out so as to cause irritation. The swelling diminished every day under the use of blisters; the globe was not inflamed, but some matter filled the eye in the morning; every blister most evidently lessened the sensibility to light.

Three weeks ago we made a very vigorous attempt, with Dr. RODRIGUE's help, to pull out the tarsus, but succeeded only so far as to discover that the cilia had grown to nearly their full length and

full number, and that the eyeball, rolling upon them, held the tarsus firmly under. Here was at once an end to all our dreams of a cure; for on such a restive child, now rendered infinitely impatient of every thing, we considered an operation as impracticable, and that the cilia would irritate the eye afresh, and prove a cause of insuperable inflammation. Wishing however to explore the state of things yet further, we made another violent attempt to pull out the tarsus, and fortunately the little sufferer did not resist, as she had always done before, with the utmost power of the orbicularis; so far from it, that, as it were by inspiration, she seized the palpebra with all her fingers, while mine were employed lower down, and she turned the tarsus completely out, so that the cilia spread over the front of the eye. It appeared to have no tendency to relapse; I saw it resume its natural situation and figure, nor could I compare the operation to any thing more appropriately, than to the reduction of a dislocated bone. The eye and palpebra assumed their natural appearance at once, and have ever since continued entirely well. The cilia stood erect at first, and spread over the eye, but they gradually assumed their proper direction.

This case was clearly not produced by ulceration, and consequent contraction of the inside of the palpebra; we should rather presume that the lid had been so distorted by tumefaction, that the tarsus was reverted under the eye-ball, and afterwards firmly held there by the pressure and rolling of the globe on the new cilia. This accords with the observations of M. Demours, that “the entropion of the inferior palpebra is most frequently the consequence of an œdema of its tissues, and particularly of a relaxation of that part of the skin which covers it.”\*

When this case obtains he cured it by forcibly everting the tarsus and securing it from relapse, by drawing down the skin with strips of court plaster, “taffetas agglutinatif, vulgairement appelé taffetas d’Angleterre.” By this method, which, however, he does not claim as original, he has cured the disease after four years continuance. But when this does not succeed, he recommends the following plan, which originated with himself. The patient is to place himself before a glass, draw out the tarsus, and resolutely hold it fast three days and as many nights, if the cure do not appear to be obtained sooner. He must not permit it to slip his fingers for a moment, as he will then lose all the fruit of his previous labour. He must sit all night before his mirror, and if he should unfortunately give way to sleep, he

\* Tome premier, p. 105, De la Trichaise.



is to seize the palpebra the moment he awakes. He relates the case of a lady, sixty years old, who had been afflicted with the disease fourteen years and yet cured herself by this method in two days and one night, having yielded to sleep only about two hours. M. Demours very truly observes that the patient's success will depend on his vigour of mind and his desire of a cure. We cannot see why the hands of an assistant might not be substituted to relieve the patient, at least during the hours of sleep.

My case was cured without any plasters, and without continuing the traction for one minute; is it not then very possible, that in some of M. Demours' cases, the cure might have been equally facile, and that the continued traction and the plasters might have been entirely dispensed with? However this may be, it is very certain, that one, or even all of these methods ought to be tried, before any cutting instrument is proposed, and particularly before the excision of the tarsus, an operation that must always leave a permanent deformity, which is very conspicuous in Mr. Saunders's second plate.

The operation commonly ascribed to Scarpa, though it was practised before his time, will not be followed by an equal deformity; but if we mistake not, it will never prove necessary in those cases which have been caused by mere relaxation and swelling of the palpebra. Our own cure consisted in reducing a mere dislocation, and the success depended principally on the child's having sunk the ends of her fingers deep into the space between the orbit and the eyeball, by which she pulled down the palpebra, and at the same time pushed the lower edge inwards, and thus dislodged and protruded the tarsus. It showed not the least tendency to relapse, which might have been partly owing to the spreading of the cilia over the eyeball, until they gradually resumed their proper direction.

I have been induced to offer this case and these observations, because the most popular systematic authors in surgery, say nothing of Demours' practice, and would probably not suspect, that the simple operation, which relieved us in one minute of such gloomy anticipations, could ever prove successful.

ART. V. *On the Internal Use of the Spirit of Turpentine in Incarcerated Hernia.* By THOMAS SEWALL, M. D. Professor of Anatomy and Physiology in the Columbian College, District of Columbia.

SOME time since, I was informed by Dr. M<sup>c</sup>WILLIAMS, a highly respectable physician of this city, that he had recently met with two cases of incarcerated hernia, in which the spirit of turpentine, exhibited in large doses internally, was successful in effecting a reduction of the protruded part, after all other means had failed. The circumstances of these cases were such, as to inspire me with some confidence in the powers of the turpentine, and induce me to determine on its application as soon as an opportunity should present. It was not long after, that the following case of incarcerated scrotal hernia came under my charge.

Early on Sunday morning I was called to visit a labouring man, by the name of Penn, a brick-maker by trade, a short, robust person, of about twenty-five years of age. He had enjoyed perfect health, with the exception of an entero-scrotal hernia, under which he had laboured for a number of years, and for which he had worn a truss.

On my arrival I found that he had been in a state of great suffering during the night, and that he was still affected with intense pain and high fever. From inquiry I learned that while at work at his usual occupation, the day previous, the intestine escaped through the abdominal ring and descended into the scrotum, and that all the efforts which he could make to reduce it were ineffectual. On examining the scrotum, I found it greatly distended, hard, and tender to the touch.

I first attempted a reduction of the bowel by taxis, but as my exertions were unavailing, I bled him largely and then renewed my exertions, but without success. I then gave him two ounces of the spirit of turpentine, and instructed my pupils, who remained with him, to repeat the same dose every hour, till eight ounces were taken, or some sensible effect produced. Soon after I left him, a profuse sweat took place, and he fell into a tranquil sleep. In about two hours the hernial tumour became soft and yielding and spontaneously retired from the scrotum. On repeating my visit in the middle of the day, I found he had taken about six ounces of the turpentine, and without experiencing any inconvenience from it. He was still sleeping, and entirely relieved. The next day he was at work in the brick-yard, and with no other complaint than that of a slight looseness

of the bowels, and a scalding sensation in the rectum in passing his stools. No strangury was produced.

Although it requires the experience derived from many cases to entitle a new remedy to confidence, the beneficial effects of the turpentine were so obvious and striking, in the above cases, that I have thought it proper to call the attention of the profession to its further trial.

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ART. VI. *Account of the Small-Pox Epidemic in Western Pennsylvania*. By L. CALLAGHAN, Licentiate of the Faculty of Physicians and Surgeons, and Member of the Faculty of Medicine of Glasgow.

VARIOLA made its appearance in the city of Pittsburgh, in the month of October, 1828, and continued to May, 1829. It is said, the first case was that of a man of colour, reported to have come from Fort George. To this man a large proportion of our citizens are inclined to attribute the misfortune of having been afflicted with this loathsome and severe visitation. This, however, is but taking a narrow and unphilosophical view of the subject, and overlooking entirely the great exciting cause of epidemics in general, viz. their origin and propagation through the medium of atmospherical influence. It is supposed in the surrounding country, that the disease spread from this city as a centre; nothing can possibly be more remote from truth; it existed in many of the more remote counties nearly in as great a degree as in the city of Pittsburgh, in proportion to the number of subjects liable to the disease.

Such was the dread inspired by the idea of its contagious influence, that persons arriving here from a distance, would scarcely delay a moment in the place; even those coming into town to attend market from the adjoining country, made all possible haste to get out again, under the impression that the disease could be caught no where but here. A goodly number of persons reported to have been vaccinated took the disease, insomuch that the faith of the community in the preventive powers of vaccination, is considerably shaken. One young man came under my observation, who had been vaccinated ten or twelve years before by a most respectable practitioner in Philadelphia; he had a distinct and well-defined mark of a vaccine vesicle on the arm, yet he had the natural small-pox in the most regular manner, though mild.



Here there were a numerous family of young persons, none of whom caught the disease. They had all been formerly vaccinated; some six, some nine, some twelve, and some twenty years before. A boy who had not been vaccinated, caught the disease; during his convalescence, and throughout the greater part of his illness, a child, about three or four years of age, who had been formerly vaccinated, was much about him—she escaped the disease.

In a family who occupied a house, in the cellar of which some persons of colour resided, ill of the small-pox, three of the children were liable to the contagion; they were vaccinated and escaped.

It is customary with our people to suppose, that if, after the insertion of the vaccine virus, a vesicle appears, they are perfectly safe, so far as vaccination can protect them. Motives of ill-judged economy also induce many to vaccinate themselves; and even in many cases where the practitioner is called on to insert the vaccine matter, he has not an opportunity of judging whether or not it has taken proper effect. Hence the occurrence of small-pox in very many of the instances which have taken place during this epidemic, after reputed vaccination, argues nothing, so far as impairing our confidence in the protective powers of this most valuable discovery is concerned.

This epidemic was characterized in general by mildness of form, the eruption being of the distinct kind, and the fever of the inflammatory type, exhibiting a readiness to give way to the usual remedial means. Some practitioners are of opinion that the disease showed itself in the confluent form in a few instances. I saw nothing of this. The eruption was occasionally so thick on the face as to give the appearance of the vesicles running into each other; while on the body and extremities they were perfectly distinct, and the low typhoid form of fever was absent. The majority of the cases which terminated fatally, were such as were either neglected or improperly treated during the eruptive fever, or had previously laboured under some constitutional defect entirely unconnected with the variolous infection.

The disease was generally ushered in by a feeling of lassitude, pains over the extremities, giddiness and pain in the head, dry skin, furred tongue, restlessness, full and tense pulse, exacerbations of heat and cold, thirst, want of appetite, constipation of the bowels, throbbing of the temporal arteries, with frightful dreams. The subjects of attack were for the most part young persons, and principally children, although there were a few cases of persons of middle age.

The mode of treatment most advantageous in my hands, was in the commencement of the eruptive fever to detract a quantity of blood, proportioned to the age and habit of the patient. To have the head shaved, and cold water and vinegar applied over the scalp. The body

and extremities sponged with cold or tepid water, according to the temperature of the surface and the feelings of the patient. Then to exhibit as much of the sol. tart. antimonii as would produce a free emetic effect, following it up by aperients until the intestinal canal was properly evacuated. A determination to the surface was afterwards kept up, by the use of the ox. antimonii cum phos. calcis, or the aq. acetatis ammoniæ. After the appearance of the eruption, gentle aperients, with the occasional use of an anodyne draught or the pulv. ipecac. et opii was generally all that was requisite. The apartments of the sick were kept cool, and as well ventilated as the locality of the place would admit. A mattress was preferred to a feather bed, and the bed clothes as light as possible. The diet recommended was thin farinaceous gruel, with cooling acidulated drink. During the period of convalescence, the most rigid abstemiousness was strictly enjoined.

Small-pox has not appeared in this country for about ten years before. There was nothing peculiar in the season during the prevalence of this epidemic; the winter was cold, but not more so than usual. But the winter previous was remarkable for the quantity of rain that fell, and the absence of frost or snow. From report of the sextons of the various burial grounds in the city of Pittsburgh, there were said to be from fifty-five to sixty interments of persons who had died of small-pox during the epidemic. What proportion this may bear to the number of recoveries, it is difficult to say, as there is no register kept, even of those who come under the care of the practitioners of medicine, and many requested no medical advice. In some of the German settlements in the adjoining counties, they utterly refused to be vaccinated, or to have any medical aid when they were attacked by the disease in the natural way. Throughout the whole course of the epidemic, cases of varioloid occurred from time to time. But there were no deaths from this cause. During the spring months whooping cough made its appearance, and variola began to diminish. I had the opportunity of making only one post mortem examination; the following are the appearances as exhibited on dissection. C. D. ætat. 30, forty-eight hours after death. Cutis covered with variola of the distinct character. General appearance of the intestines much injected with blood. Colon very much inflated. Gall-bladder turgid with bile of a black, viscid appearance. Pancreas exhibited a wasted appearance. Coats of the stomach injected with blood. An accumulation of hardened fæces near the arch of the colon. The veins on the meninges of the brain, turgid with blood. Venous congestion in the cerebrum, and the lungs full of dark, grumous blood.

*Pittsburgh, May, 1829.*

ART. VII. *Perforation of the Stomach, without Ulceration or Softening of its Coats.* By LEONARD PEIRCE, M. D. of Sutton, Massachusetts.

**FLETCHER BOTTOMLY**, a native of Cheshire, England, came to the United States in June, 1827, then aged nineteen years; he followed weaving in a woollen manufactory.

*January 30th, 1829.*—I was called about six o'clock this evening to visit him, but being from home, did not see him till nearly eight. I found him suffering from severe pain in the region of his stomach—feet and hands cold—pulse small and fluttering—countenance contracted and anxious. On inquiring of himself and his comrades, I learned that he had been as well as usual till about five this evening, when he was suddenly seized with a violent pain at the epigastrium, which soon extended downwards, but the seat of the pain remained at the stomach. When first seized, the pain was so violent that he cried out “I am dying,” and threw himself upon the floor, holding his bowels with his hands, and pressing his body and thighs together. He was soon helped to his lodgings, which were a few rods distant, but was unable to walk upright, remaining bent, supporting himself with his hands upon his knees. The pain still continued violent, but was not now confined to his stomach, being occasionally as low down as the pubic region. Before I arrived he had taken an emetic of ipecacuanha, containing eight grains of calomel, which had vomited him twice with some relief; but the pain being *now* in his stomach, I gave him tepid water, which vomited him twice more, and he expressed himself considerably relieved. I now applied flannels wet with warm water to his extremities, and gave him two grains of solid opium. His extremities soon became warm; pulse fuller and stronger; the pain abated considerably, and he fell asleep. I now directed one ounce of castor oil to be given every three hours until his bowels were moved, and left him for the night.

*31st.*—At 7 A. M. I found him considerably prostrated, and in pretty severe pain. Pulse fluttering, and extremities cold. The bowels were rather fuller than natural, but were not tender on pressure; had passed a restless night, and taken the oil without producing any sensation of motion in his bowels; quite thirsty. I now divided two drops of croton oil into six parts, and directed one part to be given every half hour until the whole was taken, unless a motion was produced. Stimulants were given, and water gruel for drink. 4 P. M. Had taken all the croton oil without producing the slightest



cathartic effect. Pulse much as in the morning; complained of considerable soreness in his bowels, which were rather fuller than in the morning. I should have given enemata, but for want of the proper apparatus was obliged to postpone them, and directed one ounce of castor oil to be given every hour, and put a blister upon the epigastrium. 8 P. M. Directed an enema of decoction of senna, which passed off in about twenty minutes without bringing any fæces with it. In a few minutes I repeated the injection, which soon passed off unmixed with any alvine matter. I directed an enema of milk and molasses, of each four ounces, to be given every hour until his bowels were moved; continued the drink of water gruel; left him for the night.

*February 1st.*—4 A. M. vomited a small quantity of a dark, fetid liquor, and in about fifteen minutes expired.

I very readily obtained leave of the friends to examine the body, which I did at 2 P. M. ten hours after his death.

The blister had produced very slight vesication, and the bowels were considerably tumid. On cutting through the parietes of the abdomen, there was a sudden gush of liquor consisting of those articles he had taken into his stomach, castor oil, water gruel, &c. I observed to the bystanders that there was a rupture of the stomach or intestines, and I then supposed it to be from ulceration. After removing the fluids from the abdominal cavity with an injecting syringe, I laid open the abdomen, and proceeded to search for disease. The vessels of the omentum, and of the peritoneal coat of the intestines were considerably gorged with blood, but there were no unnatural adhesions between any of the parts. The mucous coat of the intestines was of a healthy appearance, except in some places in the small intestines there were minute scarlet dots thickly set together. The urinary bladder was entirely empty, and of a healthy appearance. Kidneys healthy. The liver was of a pale ash colour externally, and internally much paler than natural. On arriving at the stomach, I found about half an inch above the pylorus, on the anterior part, an opening about two and a half lines in diameter. This had the appearance of having been punched out with a cutting instrument, and was not much unlike the holes made in harness for the buckle tongues, but the edges were not quite so well defined as though cut with an edged tool. There was no appearance of disease about the perforation, either externally or internally, except that the mucous lining of the stomach was filled with black and brown dots of about the same appearance, except in colour, as the grains of Indian meal taken in the gruel.

Bottomly was of a melancholic temperament, tall, spare, and tem-

perate in the use of spirituous liquors. He was a voracious eater, devouring as much at his regular meals as two common eaters, and frequently eating between meals, and always taking some cold food just before going to bed. He had for several years previous to his death been afflicted with purulent ophthalmia. Since the time of his arrival in this country he had been very costive, generally not having a stool oftener than once a week. He had within three or four months of his death, three small, hard, red, or rather purplish tumours directly in the pit of his stomach, which were very sore and painful, slow in forming, and difficult to cure. He usually applied a plaster of shoemaker's wax to them, which caused them to ulcerate and discharge a sanious, bloody matter, and then they would heal. The last one was a little previous to his death, but had at the time got entirely well.

*Sutton, April 10, 1829.*

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ART. VIII. *Some Observations on Wounds of the Heart.* By JOHN REDMAN COXE, M. D. Professor of Materia Medica and Pharmacy in the University of Pennsylvania.

IN the last number of this Journal, p. 263, is a notice of a very interesting case of gun-shot wound of the chest, in which the patient lived sixty-seven days after the accident, and on post mortem examination, three shot were found lying loose in the cavity of the right ventricle, and two in the right auricle.

The case is of that interesting nature, that it strongly arrested my attention; more especially, since the affirmation of this wound of the ventricle, and its subsequent healing, is in direct opposition to every recorded case of the penetration of the cavities of the heart, of which I had collected a considerable number, in my *Memoria Medica*. After considerable deliberation, I have therefore ventured to draw up the following observations, in opposition to the opinion entertained by those respectable physicians who have recorded the case; hoping that they may either change those opinions, or that they may have an additional mass of facts on the subject, that may correct my own if erroneous.

That wounds of the heart are *invariably fatal*, when penetrating its cavities, is confirmed by every case to be found in the records of

our science.\* That such wounds are *necessarily* so, merely from the structure of that viscus, is not so evident; the fatality arises from the nature of its functions, and the absolute tendency to death, which, the unarrested discharge of blood, must inevitably promote; rather than from any incapability of its admitting of the same salutary influences of nature, that are conspicuous in every other muscle of the body; and hence there is no deficiency of recorded healing up of superficial wounds and ulcerations, &c. of the heart, where a due adaptation of cure had been sedulously attended to. It is also obvious, from the cases I shall adduce, that life has been prolonged even up to the sixteenth and seventeenth days, and through all the intermediate period; but which must obviously have been the result of some mechanical cause, by which the blood was not able to pour forth in an acute, but only in a chronic manner, if I may use these terms for this particular view of the subject. In none of these cases was the wound healed, nor was life in any of them preserved, even during one-third part of the period of the case which has given rise to these remarks. I am consequently led to believe, that in this case, the shot thus found within the cavities of the heart, reached them by a very different conveyance than that pointed out!—and that the spots assumed as eschars of their transmission, were but the marks of superficial injury, or mere lesion of the external surface by shot, that never penetrated beneath that surface.

I shall now detail some of those cases I have adverted to, in hopes that they will tend to corroborate my previous remarks, as well as the few that will subsequently be made.

PAREY, lib. 10, cap. 30, gives an account of a gentleman, who, fighting a duel, received a wound which penetrated his heart, so large as to contain his finger; yet he struck some blows afterwards, and followed up his flying enemy above two hundred paces before he fell down dead.

Frederick 3d of Denmark, is reported to have shot a stag through both ventricles of the heart, who ran fifty paces before he fell.

\* I speak of wounds from fire-arms or swords, &c. Certain it is, that acupuncture has been effected, without death ensuing; but there is little analogy between this and the former. Glandorpius relates on the authority of Sanctorius, that the heart of a rabbit was perforated by a sharp instrument, the animal being alive at a period of several months. I have heard it stated that a physician of this city, intent on prosecuting some experiments on acupuncture, had actually introduced a needle into the substance of his own heart. I know not how true this is, but if so, he is yet active, and apparently in perfect health.



MULLER relates the case of a soldier, who lived fifteen days after a wound of the right ventricle of the heart. HEER relates several cases of a similar nature, and TULPIUS mentions one who survived a similar wound for two days. *Obs. lib. 2, cap. 18.*

SAVIARD, *Surgery, Obs. 113*, states the case of a man, who lived four or five days after a wound, in which the heart had been thrust through, from the right ventricle into the left, across the septum medium; he ascribes this prolongation of life to the blood forming clots, after filling up the cavity of the thorax, by which the mouths of the wounds in the ventricles were stopped. Unquestionably this is a cause of temporary survival at times—another may be, the slanting direction of the wound, opening like the ureter in the bladder, so as to form a valvular apparatus; other mechanical explanations may probably be assigned.

VANDER WIEL, *Centur. Obs. Rar. vol. 2, p. 258, Leyd. ed. 1727*, refers to Muys, to Tulpius, and others, already, or presently to be mentioned. One case referred to is that of Heers, (*Obs. Med. lib. 1, c. 2, fol. 115,*) in which, (the heart penetrated by four balls,) the person survived fifteen days.

RHODIUS, *Obs. Med. cent. 2. cap. 39*, mentions one who lived nine days after a wound of the heart.

T. BARTHOLINE, *cent. 1. hist. 77*, states a case where a person wounded through the heart, walked a considerable distance, and survived five days. He adverts also to the stag above mentioned, as being shot through both ventricles, and in which the wound was large enough to admit the extremities of three fingers. He has, *cent. 3, hist. 12*, moreover, detailed from BACON, (*Hist. Vit. et Mort.*) a curious case, the outlines of which may be seen in the Esculapian Register, p. 125, of a man, who attentively contemplated his own heart, after it had been cut out from his body, and of another who was heard to speak several words of prayer, after the executioner had his heart in his hand.

ACOSTA, in *Hist. Ind. lib. 5. cap. 22*, mentions an Indian, whose heart being cut out in sacrifice, yet spoke to the Spaniards.

S. BLANCARD, *Op. Med. and Chir. vol. 2, p. 110*, relates the case of a soldier, who fighting, received a thrust under the left breast, penetrating the heart; he did not however cease fighting, but followed up his antagonist two hundred paces before he fell, the wound being capable of admitting the forefinger. This case I believe must be the same that is above reported from Parey; it is not so stated by Blancard, who has, however, so much regard for it, that he has re-

peated the case exactly at p. 585, though why, I cannot well imagine.

DIEMERBROECK, in his *Anatomy*, Lond. fol. 1694, p. 310, states from SCHENKIUS, that a student received a wound through both his ventricles, yet he ran the length of a whole street, and was in perfect sense of mind for an hour; he refers also to several of the preceding cases; and to others, from SENNERTUS and JOHNSON. He says likewise, that he himself saw, and dissected a young man in 1660, who was wounded by a sword, and walked fifty or sixty paces before he fell; being carried home, he came to himself, and lived nine days eight hours after the wound was received. It had penetrated directly into the upper part of the right ventricle.

ANTONIUS BENEVENIUS, in his surgical works, (An. 1529,) has a chapter entitled “*Cordis pars patefacta inciso abscessu, & æger tamen restitutus.*” Not having his work, I know not what are the particulars of this case. It is probable however that the incision of the abscess, had no connexion with the interior of the heart.

MUYS, in his “*Rational Practice of Chyrurgery,*” p. 200, states that he witnessed “a Jew Arnhemium, wounded in the very substance of his heart, who, notwithstanding, twice a day, for six days together, before he died, came to his house on foot to have his wound dressed.”

This writer says moreover, “that Galen relates as an eye witness, that the pericardium being corrupted, the heart lay sufficiently bared in the breast of a certain sick man, who notwithstanding recovered.” I have not been able to find this statement in Galen; but he has in his treatise “*de locis affectis,*” lib. 5. the following observation. “*Si ad ventrem cordis, præcipuèque sinistrum, aliquando penetraverit vulnus, protinus cum multo sanguine vitam exhalabit animal. Si verò non ad ventrem usque pertingat, sed in cordis substantia consistat vulnus, ex ita affectis aliqui non solum ea die, qua vulnerati fuerunt, sed sequenti quoque nocte potuerunt vivere.*”

That the heart is however in itself not very acutely sensible, is proved by its having been the seat of several severe diseases, without the patient suffering much; and the extraordinary operation not many years past, performed by RICHERAND, is equally a proof of the same. The most singular example of the fact, is, in my opinion, one detailed by the great HARVEY, in his treatise “*de generatione Animalium,*” and which, as I have never seen it quoted, I consider worthy of introducing in this place. See *Exercitatio 52*, entitled “*De Sanguine, prout est pars principalis,*” p. 198, ed. Amst. 1662, 12mo. in which

amongst other matter, he attempts, by the relation of the case, to demonstrate the little sensibility of this important viscus. I give the principal outline.

A noble youth, the eldest son of the illustrious Viscount of Montgomery, in Ireland, whilst yet a boy, by an unfortunate fall, fractured the ribs of the left side. An abscess formed, and discharged profusely; and so continued for a long time, as related to Harvey by himself and others. About the age of eighteen or nineteen, he travelled through France and Italy, and from thence came to London. During all this period, a very large and open space continued in his breast, so that the lungs, as it was supposed, could be therein both seen and touched. This being told to King Charles, as a great wonder, he immediately sent me to examine the young man. I found him apparently healthy, and explained the cause of my visit by the king's command. The part was immediately exposed to my view. The dressings being removed which he wore as a defence against any external injury, I saw, says Harvey, an immense cavity in the breast, into which I could readily pass my three forefingers and thumb. At the same time I noticed at its entrance a certain fleshy protuberance, reciprocally moving inwards and outwards, and which I carefully handled, (*tractavi*.) Astonished at the novelty of the case, again and again I examined every part, and diligently and sufficiently investigated it. Assuredly a large and old ulcer had miraculously healed, and was on its inner part, covered with a membrane, and invested with a firm skin about its edges. The fleshy part, which, at first sight I had taken to be a luxuriant growth of flesh, and which others supposed to be a part of the lungs, from its pulsation and difference of stroke, (a hand being applied conjointly to the carpus and heart,) as also from attending to the respiration, I plainly perceived that it was not a part of the lungs, *but the heart itself*, which a fungous flesh, as in sordid ulcers, covered exteriorly. This was daily cleansed by warm injections, and the dressings replaced. Which done, he exercised in the way most agreeable to him, and enjoyed his existence.

I carried this young man, says Harvey, to the king, that he might himself see, and feel with his own hands, so strange a thing; viz. that in a living and healthy man, without any injury, he might perceive the heart itself beating, and its ventricles pulsating, and touch it with his hands. Both the king and myself found the heart to be devoid of sensibility, for the young man, (except when looking, or by the sensation on the external skin,) knew not when we touched it.

I cannot resist inserting the following quotation from his 68th Exercitation, p. 294, as an evidence that we have probably, by means



of the civil wars, lost some very important works of this learned man, and which we must deplore, as never likely to be regained:—

“Atque hæc dum agimus, ignoscant mihi niveæ animæ, si (summarum injuriarum memor) levem gemitum effudero. Doloris mihi hæc caussa est: cum inter nuperos nostros tumultus, & bella plusquam civilia, serenissimum Regem (idque non solum Senatus permissione, sed & jussu) sequor, rapaces quædam manus, non modo ædium mearum supellectilem omnem expilarunt; sed etiam, (quæ mihi caussa gravior querimoniam,) adversaria mea, multorum annorum laboribus parta, è musæo meo summanarunt. Quo factum est, ut observationes plurimæ, (præsertim de generatione Insectorum,) cum reipublicæ literariæ, (ausim dicere,) detrimento perierint.”\*

\* It is rather a singular circumstance in the annals of medicine, that so few instances are recorded of the actual exposure of the heart, without injury. The two above mentioned were the only cases I had met with in my reading, until within a few days; when accidentally consulting the writings of Galen for a different purpose, I found in his 7th book, “De Anatomicis Administrationibus,” Chap. 12th and 13th, as remarkable a case as either of those, from his own authority, (Ed. Ven. 1586, 7 vol. fol.—Vol. 1. p. 97,) and which is certainly deserving of being quoted.

At the conclusion of an excellent chapter, (12th,) entitled “Administratio Cordis & Pulmonis in vivo Animalis,” he points out the insensibility of the heart, (if we may so say,) in the following words. “At Corde denudato omnes ipsius functiones incolumes servare tibi propositum est, quemadmodum etiam servantur; siquidem & respirare similiter & clamare animal vides: ac si à vinculis ipsum liberet, currere, sicut prius consuevit. At, si vulnus vinculis adhuc comprimam, etiam cibum assumere, si esuriat, conspicias: & bibere, si sitiat. Et quid miri est? cum Marylli Mimographi puer curatus sit, vivat que adhuc, etsi cor aliquando ipsi fuerit detectum.”

Whether this case may not be sufficient to establish Galen as a bold and resolute surgeon, may be perhaps variously viewed by different readers. To me however it affords most ample proof of his anatomical skill, and of his prompt and sagacious decision; to which nothing but a free use of the dissecting knife on the *human subject*, could have possibly led him. In vindicating him from the continual assertions of servile copyists from each other; anxious to traduce the character of this great man, and to bring him down to a level with themselves, I venture to insert the case as related by himself; and I request that it may be borne in mind, that Galen lived nearly eighteen hundred years ago!

Cap. 13. “Historia pueri persanati, cui os pectoris excisum erat, & involucrium cordis computruerat.”

“Quoniam vero semel curati pueri mentionem feci, nihil mali fuerit omnia, quæ ipsi evenerunt, percensere. Nam propter historię utilitatem, etiam si ad præsens opus nihil attineat, non abs re fuerit ea commemorare: Ictus puer ille in pectoris osse in palastra, neglectus primum est, deinde parum probe curatus. Post menses quatuor pus in parte percussa apparuit: hoc auferre cogitans

Many other examples of a similar kind I could no doubt collect. These are however sufficient to show, that although life may be prolonged from accidental causes, even for several days, yet that no solitary case exists, wherein a wound penetrating the heart, has ever been known to heal. I cannot, therefore, for an instant suppose, that in Dr. RANDAL'S case we can perceive an established fact of an opposite character; or that, presuming the shot to have penetrated the heart, any other event than that of death was to be anticipated. The whole circumstances of the case, if strictly scrutinized, forbid us, I think, to admit of that view which is taken of the subject. I have already said, that the scars seen, were probably only the relics of a *superficial* injury sustained, from the shot not possessing an impulse sufficient to go deeper, or perhaps glancing from the ribs. If a scar is sufficient to prove such an anomaly in a case like this, then indeed we may accredit a case of CABROLIUS, who "found in the heart of a thief, that was hanged, the remaining scar of a wound that had been cured, about two fingers long, and about the thickness of a sixpence." This, (which I quote from Diemerbroeck, p. 311,) will, I presume, scarcely be considered as proving the wound to have pass-

Medicus puerum incidit, & (ut putabat) subito ad cicatricem vulnus perduxit; postea rursus inflammatio oborta est, mox quoque abscessus: iterum sectus puer est, nec amplius cicatrix obduci potuit. Quapropter herus ipsius pluribus Medicis convocatis, *inter quos ego quoque eram*, deliberare super curatione pueri jussit. Cum autem sideratio, quam Græci *σφακελον* appellant, pectoris ossis affectus videretur omnibus, appareret autem & *Cordis à sinistra ipsius parte motus*, nemo affectum os excidere audebat: quippe arbitrabantur thoracis perforationem necessario futuram. Ego autem citra vocatam proprie à Medicis perforationem adhibitum pollicitus sum me excisurum: de absoluta vero curatione nihil promissi, cum incertum esset, num aliquid ex iis, quæ pectoris ossi subjacent, fuerit affectum, & quatenus affectum: Itaque regione detecta amplius, nihil in pectoris osse læsum apparuit, quàm quod ab initio statum vidibamus: quare etiam magis ad manus operationem venire sum ausus, cum jam fines, quibus arteriæ & venæ subhærescunt, utrinque illæsi occurrissent: cum vero affectum os ab eo potissimum loco excidissem, in quo talis pericardii vertex adnascitur: *cumque nudum cor appareret*, (quippe involucrum ipsius computruerat,) ob hoc quidem haud bonam statim spem de puero habebam, attamen in totum brevi temporis spatio persanatus est: quod non accidisset, si nemo affectum os abscindere ausus fuisset: *nemo autem tentasset, nisi in administrationibus anatomicis præexercitatus,*" &c.

I cannot believe that a man who writes and acts thus, could have limited his dissections to brutes alone. And if a good translation were made of his principal writings, our present readers would find very much therein, that within the last fifty years has been claimed by others! Thanks to our ignorance of the authors of the olden time!

ed into the cavities, and yet the argument is the same. The chief advantage in the case of Dr. Randal's patient is, that the shot were in the cavities of the heart; and the only question as to the difference of opinion between myself, and the apparently conclusive evidence of the senses, by autopsic demonstration, is, how they got there?

May I ask, whether, in a wound, or rather five wounds penetrating the heart, little or no hæmorrhage would be likely to take place, either at the instant, or at some period before the adhesive process was completed; is it likely, in a wound made by the "whole charge" of shot, the greater part of which seem clustered in the lungs, that in the course of a week the wound would be healing, and in three or four weeks be completely cicatrized, while such perforations existed in the ever moving viscus? Is it likely that three shot would continue permanently during sixty-seven days in the right ventricle, and two in the auricle? and how indeed, from the location of the wounds, could the latter have gotten into the auricle? Are we to suppose, that during sixty-seven days, these five shot remained unmoved, exposed to the full torrent of the circulating stream? Would this rapid motion not rather have impelled them into the pulmonary artery; and driven them to a part whose calibre they could not pass; and when of course dissection might have traced them? In opposition to these difficulties, where is the dilemma, if we suppose, that, as the lungs were loaded in various parts with shot, the deranged state of those vascular parts, inducing suppuration, &c. should, (although the external wound might heal;) nevertheless, after that period, bring on hectic fever and other symptoms; and that some of the vessels, eroded or absorbed by the pressure of a leaden shot, might at length permit some of the cluster to fall into its cavity; and at the moment of death, by mere gravitation, find their way into the cavities of the heart, in which they were seen and detected? Had the idea suggested itself, it is not impossible, that even other shot might have been found, that might have fallen into the vena cava, and only been arrested by some distant valve!

By such, or some process of a similar description, can I alone suppose that we can *plausibly* explain the various circumstances of the case! The *actual* penetration of the cavities of the heart, is altogether problematical; and if the shot did really find their way in the manner affirmed by the gentlemen who relate the case; I can only say, that it is an anomaly as regards the wounds of the heart; and being in total opposition to *every* hitherto recorded fact, it must stand as an insulated one in the annals of medicine!



ART. IX. *Inquiry into the Causes, Nature, and Treatment of Hernia Cerebri.* By J. W. HEUSTIS, M. D. of Cahawba, Alabama.

THE importance of the integrity and sound condition of the brain to the healthy, rational, and perfect performance of the various intellectual and corporeal functions of the human system, is a physiological fact, which few at the present day would have the scepticism or heresy to deny. Yet exalted as are the offices of this organ, experience teaches us that it is capable of enduring serious injury, without destroying or endangering life. That these injuries impair to a greater or less degree the functions of the animal economy, is obviously true; but the wonder and surprise are, that in many instances the effect should be so apparently trivial and disproportionate to the cause. Thus, experiments on the inferior orders of the animal creation show that the brain may be sliced away to near the basis of the skull without the immediate destruction of vitality; and even in the human subject the skull may be extensively fractured and driven in, the periosteum abraded, the dura and pia maters lacerated, and even a portion of the brain lost in consequence of the injury, and yet the patient recover. If then the brain can suffer such severe and extensive injury without destruction to life, the inquiry might suggest itself, what are the extent and degree to which this organ may suffer injury and violence without endangering the life of the individual. But as we have no scale by which we may accurately measure the grades of suffering and derangement of the animal system, we must leave this inquiry where we found it. This, however, we do know, that if the external violence or internal lesion exceeds a certain degree, death is the inevitable consequence.

Mere fracture of the skull, although extensive, is not generally fatal. And in cases of external violence done to the head, as from blows and falls, death is perhaps owing more to concussion than to pressure upon the brain, either from the bone externally, or from extravasation of blood within. It is true, that in cases of severe fracture, the intellect is generally deranged and impaired, the person lying more or less comatose and insensible, the stomach sympathetically affected, weak and irritated, rejecting its contents; the eyes squinting; the limbs paralytic, &c.; yet the presumption is that most of these symptoms are owing to concussion, which is always a necessary consequence, in a greater or less degree of such violence as causes a fracture of the bones of the cranium; and what is more conclusive upon this point is that such symptoms may, and do occur

without any fissure or depression having taken place. But although in injuries of this nature, life may not be destroyed by the mere pressure of the bones upon the subjacent cerebrum, yet where symptoms of the character above mentioned exist, we are certain that the injury received is urgent and severe, and such as demands the immediate interference and aid of medical discretion and surgical skill. The worst fractures that I have ever seen, were unaccompanied with laceration of the integuments; still the touch, the unequal feel, the tumid and ridgy hardness, the puffy softness, and in addition to all, the stupor and abolition of intellect, were strong and positive assurances of the extent and severity of the subjacent mischief. Upon making a crucial incision and dissecting up the integuments, we find, perhaps, extensive fissures in different directions; sometimes laying open the sutures, extending from ear to ear, or stretching obliquely, and bursting open the socket of the eye, with a considerable portion of the coronal or parietal bones broken and depressed; and not unfrequently a portion of the brain forced out upon the surface of the skull in the same manner that a heavy blow, or great pressure upon the yielding ice, causes the subjacent fluid to escape by the nearest opening. Now, as the cerebral mass fills completely the cavity of the skull, any considerable pressure upon it from any cause, or in any part, more than it is able to sustain, must produce a tendency in the brain to escape by any opening that may accidentally exist; as it is in this way, from great external violence and injury done to the brain and its membranes that *hernia cerebri* owes its origin, the foregoing remarks I trust will not be considered irrelevant to the subject.

In many instances these fungi or cerebral hernia are not attended with any dangerous or alarming symptoms; and it would therefore seem that the more aggravated constitutional affections, which sometimes accompany their existence, have not so necessary a connexion with these fungi as cause and effect, as they are owing to meningeal and cerebral inflammation, and extravasation of lymph into the ventricles, as the effect of such inflammation occasioning pressure of the encephalon, and thence giving rise to the various symptoms connected therewith. This affection rarely takes place, unless great injury has previously been sustained by the brain and its membranes; and a frequent cause appears to be the laceration of the meninges, from points and edges of the broken pieces, and spiculæ of bone detached from the inner table of the skull, and penetrating into the substance of the brain. Another circumstance favouring its occurrence, is the loss of a considerable quantity of bone, more especially if at the same

time a laceration of the membranes should have taken place; from both these causes, the natural support of the brain is taken away, and an increased momentum of blood being determined to the part by the excited and inflammatory action of the vessels; the latter, instead of a healthy secretion, throw out this exuberant and fungus excrescence.

Previously to its appearance, however, where the intellect is unimpaired, the patient is affected with more or less fever, preceded by shivering and chilliness, and accompanied with pain in the head. "His countenance is of a pale, dirty, cadaverous yellow. As the tumour increases, he has frequent sickness, is giddy, and reels like a drunken man."\* After this, the pulse becomes slow and weak; he betakes himself entirely to bed, being no longer able to sit up; his mind becomes wandering and incoherent; he lies oppressed, and his pulse is a mere tremulous motion of the artery. In more aggravated cases, the symptoms of compression and irritation of the brain are more considerable and violent. The patient becomes delirious; is incapable of performing any voluntary motion; the muscles of the face and limbs are affected with convulsions; the countenance is distorted; the eyelids fixed and squinting; the jaws are spasmodically closed, or affected with convulsive motions, occasioning an involuntary grinding of the teeth. The tongue is either paralytic, or rigid with spasm, and articulation thereby rendered impracticable. Sometimes the convulsions extend to the whole body, and there is a perfect opisthotonos.

Where this affection comes on from gun-shot wounds of the head, in which the skull and membranes of the brain have been much broken and lacerated, accompanied by symptoms of constitutional derangement above mentioned, the event is often, and perhaps generally fatal. But when in cases where these symptoms have come on to a considerable degree, provided the person has been previously healthy, and the constitution unimpaired by sickness or intemperance, the danger may often be subdued, and life preserved by proper treatment.

Post mortem examinations in this disease have discovered traces of high inflammation in the pia mater, and the ventricles of the brain filled with a serous fluid, mixed with blood.

With respect to the nature and causes of *hernia cerebri*, considerable difference of opinion exists among practitioners of the present day; this want of unanimity in theory has accordingly led to a corresponding diversity of practice. By some, these affections are con-

\* Charles Bell, *Operative Surgery*.



sidered as consisting, for the most part of coagulated blood. By the older physicians they were supposed, from their pulsatory motion, to be aneurisms; others imagined them to be occasioned by an ulceration of the cerebral mass, whilst some are of opinion that they are mere excrescences, occasioned by a morbid action in the vessels of the brain. It would appear, however, from the most generally received notions, that the opinion of Mr. ABERNETHY in relation to this subject, is not supported by the concurrent sanction and experience of others; nor does it appear to comport with that accuracy of observation and just discrimination, which we might reasonably look for in a gentleman of such reputation and experience in his profession as Mr. Abernethy. His opinion appears to be that these cerebral tumours consist of coagulated blood, effused from some wounded or diseased vessel beneath the surface of the brain. Relating the case of a young man who had died of this disease, he remarks that upon examining the tumour it was found larger than before, and of a dark colour, with an irregular granulated surface, which appearance seemed to be owing to coagulated blood which adhered to its surface, as the part had bled so much that one-half of the cap which the man had worn, was rendered quite stiff by it. "A part of this tumour being cut off where it was lacerated, appeared to consist of coagulated blood of a fibrous texture."

His reasoning and deductions from these premises are as follows:—

"The appearances on dissection clearly explain the cause of the symptoms which had taken place, and rendered it evident, that the disease under which this man had chiefly laboured, was inflammation of the pia mater. The nature of the tumour, also, was not less satisfactorily pointed out. It was plain, that in consequence of the brain being injured to some depth beneath the surface, disease of the vessels and consequent effusion of blood had ensued; that the effusion was, for a while, restrained by the superincumbent brain and its membranes; but these gradually yielded to the expansive force exerted from within, and at last giving way altogether, the fluid blood oozed and coagulated upon the surface of the tumour. It appears very probable that the disease frequently described by the term *hernia cerebri*, consists, as in this instance, of a tumour formed by coagulated blood; for an organized fungus could hardly be produced in so short a time as that in which these tumours are generally formed."

From a note subjoined at the end of his observations on this complaint, it appears that Mr. Abernethy himself only considered that form of this disease which corresponds with the above description, as a sub-species, and one, it would seem, of rather rare occurrence. He observes, in his note, that he never meant, in the recital of the cases above referred to, to deny, that the surface of the brain, when exposed and irritated, would throw out a vascular fungus; and that

it was only intended to describe a species of those appearances which had been denominated fungus or hernia cerebri. He further remarks, that in all the cases of true fungus cerebri which he had seen, when he first wrote the foregoing, the fungus grew so slowly, that it could not be mistaken or confounded with the appearances which took place in the cases he had cited. With what reason or propriety then, could Mr. Abernethy presume to erect a subordinate variety of this disease into a generic character, and founding thereon its causes, nature, and mode of treatment? Mr. Abernethy objects to this fungus being an organized substance from the rapidity of its growth. But, in answer to this, it may be remarked, that it is the nature of most fungi and excrescences to be extremely rapid in their growth. The part thus produced being destitute of healthy granulations, there is, consequently, not required in its formation that perfect elaboration of sound, assimilated, animalized secretion, which takes place in every portion of the body when unaffected by morbid action. I do not, however, pretend to deny, that fungus-like excrescences from the brain, simulating hernia cerebri, have never occurred; though it is presumable that such cases are rare, and as they are easily distinguished, ought not to be confounded with the disease under consideration. The same may be said of that protrusion of the cerebrum and its meninges proceeding from internal suppuration, and consequent collection of matter beneath the surface of the brain. It is, however, possible, and even probable, that in some cases these fungi and abscesses may have a cotemporaneous existence: from the pressure of the membranes, against the rough and sharp edges of the bones, where the fracture had taken place, their integrity is destroyed by sloughing and suppuration, and the abscess may thus find its way into the substance of the brain; at the same time, a locally increased, vascular, inflammatory action existing, a fungus excrescence shoots up, instead of a deposition of healthy granulations.

In this affection there is always observable a very considerable pulsation in the part; not depending, as Professor BLUMENBACH, and the older physiologists believed and affirmed, with respect to the motion of the brain, upon the process of respiration, but produced entirely by the action of the arteries. That any doubt should ever have been entertained in relation to this matter is, indeed, the more astonishing, since, to the senses themselves, this cerebral motion is in perfect synchronous correspondence with the action of the arteries in other parts of the body. One thing worthy of observation in hernia cerebri is, that the more rapid the growth of this excrescence, the more perceptible and stronger, is this pulsation; showing that there

exists an increased determination of blood to the part, in the same way as in other instances of local inflammation and excrescences.

As far as my own observation extends, I am warranted in the opinion that this disease consists of a fungus excrescence from the brain, in consequence of preceding violence done to this organ, followed by increased vascular action in the part affected, producing an exuberant secretion of cerebral matter, which, being unrestrained in consequence of the deficiency of the natural support and covering of the brain, protrudes through the opening in the skull, and rises in the form of an unsightly mass above the surrounding integuments of the head. Upon removing excrescences of this description with the knife, they have appeared to be perfectly organized, of the colour and consistence of the cineritious portion of the brain, plentifully supplied with blood-vessels both arteries and veins, and which bled freely on being divided. If these fungi were merely lumps of clotted blood, according to the notion of Mr. Abernethy, we should never find such a perfect resemblance to the organization of living matter. True, they are in a great degree, and perhaps entirely insensible; but so, likewise, I believe, is the substance of the brain; and the same thing holds true with respect to various other healthy organizations of the body, as the bones, cartilages, fat and marrow. In further proof of the vitality and organization of *hernia cerebri*, I have known them after having protruded through the opening in the cranium, and acquired considerable size, become firmly attached to the integuments of the head and the surrounding parts; thence deriving an increase of vascularity and nutrition from the anastomosis of vessels, and to which the same increased and morbid action was communicated. I know it was the opinion of Mr. HUNTER, an opinion subsequently adopted by Mr. Abernethy and others, that a coagulum of blood, formed by accidental extravasation in any part of the body, might subsequently become a living organized substance, possessing its own blood-vessels and nerves, with a principle of individual increment and nutrition, and thus laying the foundation for tumours and excrescences. In the course of his experiments and observations, instituted with a view to establish a living principle in the blood, Mr. Hunter was naturally induced to attend to the phenomena which took place, when that fluid was extravasated, whether in consequence of accidental violence or other circumstances. The first change which took place he found to be coagulation: and the coagulum, thus found, if in contact with living parts, according to Mr. Hunter, did not produce an irritation similar to extraneous matter, nor was it absorbed and taken back into the circulation, but, in many instances, preserved its living principle,



and became vascular, receiving branches from the neighbouring blood-vessels for its support; it afterwards underwent changes, rendering it similar to the parts to which it was attached, and which supplied it with nourishment. Mr. Hunter's opinion was, that when these coagula are not disturbed by the motion of the parts, they readily formed an intimate attachment through the intervention of new-formed vessels. But that when there is considerable motion in the part where this coagulum takes place, the attachment becomes diminished by the friction, rendering it, in some instances pendulous, and in others breaking it off entirely. This circumstance he illustrates by an instance which occurred in the examination of a dead body, in which, upon dissection, "there appeared lying upon the peritoneum a small portion of red blood, recently coagulated; this, upon examination, was found connected to the surface upon which it had been deposited, by an attachment half an inch long, and this neck had been formed before the coagulum had lost its red colour. This, steeped in water so as to become white, appeared like a pendulous tumour." In this way he explains the formation of those pendulous bodies, which sometimes occur attached to the inside of circumscribed cavities, as the knee-joint, for instance, the extravasated blood assuming the nature of the part in which it is effused. The cartilages in the knee-joint, therefore, appeared to him to originate from a deposite of coagulated blood upon the end of one of the bones, which had acquired the nature of cartilage, and had afterwards been separated. Mr. Abernethy, who adopts this opinion, pursues the subject as follows:—

"Had vessels shot through the slender neck, and organized the clot of blood observed by Mr. Hunter, it would then have become a living part, it might have grown to an indefinite magnitude, and its nature and progress would probably have depended on the organization which it had assumed. I have in my possession, a tumour, doubtless formed in the manner Mr. Hunter has described, which hung pendulous from the front of the peritoneum, and in which the organization and consequent action have been so far completed, that the body of the tumour has become a lump of fat, whilst the neck is merely a fibrous and vascular texture. There can be little doubt that tumours form every where in the same manner. The coagulable part of the blood being either accidentally effused, and deposited in consequence of disease, becomes afterwards an organized and living part, by the growth of the adjacent vessels and nerves into it. When the deposited substance has its attachment by a single thread, all its vascular supply must proceed through that part; but in other cases the vessels shoot into it irregularly at various parts of its surface. Thus, an inorganized concrete becomes a living tumour, which has at first no perceptible peculiarity as to its nature, though it derives a supply of nourishment from the

surrounding parts; it seems to live and grow by its own independent powers; and the future structure which it may acquire, seems to depend on the operation of its own vessels. When the organization of a gland becomes changed into the unnatural structure which is observable in tumours, it may be thought in some degree to contradict those observations; but in this case the substance of the gland is the matrix in which the tumour is formed."

It unfortunately often happens with men of ardent minds and sprightly genius, that in their investigations after truth, or in the pursuit of a favourite hypothesis, some fitful and dazzling idea strikes their fancy with peculiar force, and is immediately seized upon as the golden key to unlock the storehouse of true knowledge and philosophy. Thus our great and much respected countryman, Dr. RUSH, fancied that by his *unity of disease*, he was enabled to explain and elucidate every obscurity, and to reconcile every apparent diversity and contradiction in medical science: had he, moreover, been successful in discovering a *unity of remedy*, the grand consummation of the healing art would have been complete. There is still, however, one consolation left to the memory of departed worth, that, in this respect he has not been more unfortunate than his predecessors. What now remains of the fine wrought theories of BOERHAAVE, CULLEN, BROWN, and a host of others, built with so much ingenuity and labour? Nothing but prostrate ruins, which, unable to support and maintain the edifice they were intended to perpetuate, lie neglected; and are passed unheeded, except as monuments of the fleeting duration of man's boasted pride and ambition.

In this way, I apprehend, Mr. Abernethy has been led astray, by attaching too much confidence to the doctrine of Mr. Hunter, in relation to the vitality of the blood. Yet, if I understand him correctly, there can be but little difference between a coagulum of blood accidentally formed in any part of the body, and a regularly organized substance; since, according to his doctrine, the coagulum itself, in time, becomes organized, being furnished with nerves and vessels from the neighbouring parts. It would seem that an opinion so much at variance with the observation and experience of almost every surgeon, would scarcely gain sufficient credit to stand in need of refutation; yet, when a notion, however erroneous, has the sanction of authority to support it, it ceases to be trivial and unimportant. It must be familiar to every practitioner in surgery, that an effusion of blood, from wounds, or other causes, and the consequent formation of coagula in any part of the body, so far from becoming organized, and consolidated with the neighbouring parts, acts as extraneous matter;

if in small quantity, it is absorbed, as if the coagulum is too large to admit of being removed by the absorbents, it acts as an unnatural irritant, giving rise to inflammation and suppuration. Thus, we often observe, that a part of the body, that has been wounded and bruised, distended and tense with coagulated blood, thrown out from blood-vessels that have been ruptured by the violence. If the part be cut into, as is frequently necessary in wounds of the head, we find that this swelling is occasioned, in a great degree, by the cause here stated; yet in a few days, in favourable cases, this effused blood is all taken up by the absorbents, and eliminated from the system as extraneous matter. In the early part of my practice I once attempted to heal a deep incised wound full of coagulated blood; the wound had been received some considerable time before I saw it, and the coagulum was hard, and firmly united to the neighbouring parts. Finding it somewhat difficult to remove this coagulum, I brought the edges of the wound together by the interrupted suture; but I was disappointed in expecting a union by the first intention; the part inflamed, became swollen and painful; I now found it necessary to open the wound and remove the coagulum, and subdue the inflammation and promote suppuration by the use of emollient poultices. So much for Messrs. Hunter's and Abernethy's coagulum becoming an organized portion of the body.

In corroboration of the above opinion I am happy to adduce the testimony of Mr. Charles Bell. Upon this subject he remarks as follows:—

“The observations which I have made, and the opinion I have formed, are so different from those of Mr. Abernethy, that I think myself called upon, in some degree to extend the consideration of the subject.” \* \* \* “I have dissected a case very much resembling that described by Mr. Abernethy, in which the section of the brain around the root of the tumour showed many spots of extravasation; and it would readily occur to any one, that this tumour had been occasioned by one of the larger vessels giving way, and pouring out a coagulum. But these spots of extravasated blood attend most ulcerations of the substance of the brain.” \* \* \* “Mr. Abernethy conceives that the bursting of the vessel within the brain is a consequence of the blow; but I have seen the disease arise after a venereal caries of the skull, in which the whole thickness of the bone had exfoliated. Further, the surface of this tumour bleeds when torn or cut. Not only it bleeds if it be torn off, but the abraded surface bleeds. This is not like a coagulum. 2. It shrinks and collapses upon death, which is certainly a mark of a part having circulation within it. 3. I have a preparation of this disease, where an ulcer passes from its base into the lateral ventricle, and where the ulcer communicated outwardly, and yet no drop of blood or coagulum was seen upon the surface of the brain, or in the cavities. 4. It is not formed of concen



tric lamina, as the coagulum of an aneurism is. The blood never bursts from its surface, as it should do even from a venous tumour, which had power in the first instance to burst the membranes of the brain. It is affected like spongy granulation from caustic. A degree of compression, equal to the compression of a considerable artery, will not subdue it when its growth has got head. 5. It has a fibrous structure, and when it is dissolved in death, it hangs in shreds, not like a coagulum. Lastly, the peculiar disposition to this disease is not shown merely in the tumour, but is evident on the margin and inner side of the ulcerated cavity."

Some have contended that the external protrusion is vicarious of more serious internal injury, which would otherwise give rise to apoplexy. Mr. Abernethy's opinion was, that this apoplexy would be occasioned by the effusion of blood into the substance of the brain, were it not that the deficiency of bone allows it to expand, by pressing the surface of the brain and its membranes through the vacant space. This, however, is all extremely problematical. As the cavity of the cranium, in its natural state, affords no vacuum, should any morbid action take place in the substance of the brain, giving rise to the production of a tumour or excrescence, is it not fairly presumable, from what takes place in other instances and situations, that the growth of the latter would be accompanied by a corresponding absorption and diminution of the former? Such a growth would, doubtless, be productive of derangement in the functions of the nervous system, and might, by its unnatural irritation, give rise to convulsions, but without occasioning apoplexy by its general compression upon the encephalon.

Much uncertainty still exists with respect to the mode of practice in this disease. Mr. Abernethy advises not to interfere with the treatment of the complaint, unless some bad symptoms should precede the appearance or accompany the continuance of the tumour. But if the tumour continues to increase, and if the patient suffers a train of bad symptoms, apparently arising from irritation and pressure made on the brain, going upon the notion, that the coagulum, of which he supposes the fungus to consist, is enlarged internally, or that by plugging up the orifice in the bone, it prevents the escape of some fluid collected within the cranium, in such cases he advises to enlarge the opening in the bone in proportion to the extent and increase of the tumour. The only apprehension of Mr. Abernethy in relation to such practice, appears to be from excessive hæmorrhage. "But although by thus allowing a free escape to the effusion of blood, we may prevent the injurious effects of its pressure on the brain, yet the de-

gree of hæmorrhage may endanger the life of the patient." It is well that Mr. Abernethy "either feigned or felt" danger in any way from such practice, lest the young and inexperienced might have been led from his recommendation into a measure as painful and imprudent as it would probably be hazardous and unsuccessful. Yet I am far from thinking that Mr. Abernethy has attributed the danger to be apprehended from this mode of treatment to the right cause; and as in the first instance he was wrong in theory, so, in the second, he is correspondingly erroneous in practice. Such a recommendation coming from a gentleman of less reputation than Mr. Abernethy, would be looked upon as grossly empirical and absurd. Thus, if we were to pursue the plan here suggested, "to enlarge the opening in proportion to the extent and increase of the tumour," we might go on removing the portion of cranium circumscribing the excrescence, till the latter might exceed the bounds of all reasonable calculation; for as this tumour seems to be confined and limited in its extent by the unyielding circumference of the opening, we may with probability presume that were this limit to its expansion removed, the tumour would proportionably increase in its dimensions. Where the hæmorrhage is considerable, or, in other words, where the growth of the *hernia cerebri* is rapid, Mr. Abernethy recommends the removal of the *coagulum*, or the tumour, and to expose the cavity in the brain, in order to learn whether suffering some sudden loss of blood to take place, together with the exposure of the bleeding vessel, might not produce a beneficial change, and a cessation of the hæmorrhage, in the same way as the removal of the dressings from wounds in other instances, and the exposure of the bleeding vessels to the air, puts a stop to the further effusion of blood. This, however, appears to be completely hypothetical, unsupported by probability or experience.

I come now to speak of the practice of removing such tumours by excision. It is now sufficiently ascertained that little danger is to be apprehended in the free removal of such tumours with the scalpel. The benefit thence resulting may be ascribed to two causes.

1. The local depletion of the vessels of the part, caused by the hæmorrhage, in the same way as topical bleeding, by cupping, and leeches, relieves local inflammation in other instances and situations.
2. The diminution of the quantity and impetus of blood to the part, in consequence of the lessened demand for the supply; for as the tumour is a morbid growth, every portion of this that is removed must proportionably lessen the extent and amount of diseased action. This practice has been long recommended in books, though but little pursued in practice. Mr. Charles Bell, in his *Operative Surgery*, says.

“the tumour should be cut off freely.” It has been objected to this operation as a practice liable to produce dangerous and fatal hæmorrhage.\* Such an accident, however, appears to be more imaginary than real. If there were any well-authenticated instances of death produced by such a cause, there would then be serious grounds for apprehension; but as no such cases have come within my knowledge, I must regard the objection as gratuitous and unfounded. I have myself repeatedly removed such excrescences with the knife, without any pain or inconvenience to the patient; and as to the hæmorrhage, it was very inconsiderable, the vessels of the part being small, and soon closing from exposure to the air. In confirmation of this practice, the following case is in point. It is quoted by Mr. Abernethy from the *Mémoires de l'Académie de Chirurgie*.

“A young man received a blow on the right parietal bone, which occasioned a fracture; some bone was removed, and a hernia cerebri was afterwards produced, which was repeatedly pared down with the knife. On the thirty-fifth day from the accident, the patient having intoxicated himself, while in this state, slipt his hand under the dressings, and laying hold of the protruding coagulum, (fungus,) tore it away with violence. The next day the surgeon found that almost the whole of what he considered as corrupted brain was removed, and a vacancy left so deep that he could see nearly to the corpus callosum. From this time forwards the parts went on healing, until they got quite well; but the patient continued to labour under a paralysis of the left side, which had supervened the day after he received the blow.”

As the inflammation surrounding the fungus is frequently attended with suppuration, and as the tumour by completely plugging up the opening in the bone, prevents the escape of the water, we hence see an additional reason for making a free excision of the tumour down to its base. Mr. Bell, in his surgical cases, says “he was obliged to shave away the tumour, and to push a lancet into its root as often as the stupor and other symptoms showed that matter was lodged there, by which the patient was uniformly relieved, and afterwards recovered.”†

\* Speaking of the advice of Mr. Bell to cut the tumour freely, Dr. Dorsey says, “This, I conceive, could not answer any good purpose, and would probably be productive of very copious hæmorrhage, which in the exhausted state of the patient might prove fatal.”

† This recommendation of pushing a lancet into the substance of the brain, in order to arrive at the matter situated beneath, might appear rash and hazardous; but provided the brain near the origin of the nerves is not disturbed, there is no immediate danger to be apprehended from wounds of its convex surface: thus, in cases of hydrocephalus internus I have several times plunged an abscess



But there is another and more powerful way of controlling this morbid action, where the hernia cerebri is accessible and partial, viz. by pressure; this method is sometimes resorted to in cases of tumours in other situations, and in some instances of local inflammatory affections. Although this practice in the treatment of fungus or hernia cerebri is not altogether new, yet among the older authors we find it only casually mentioned as a doubtful expedient, that might be resorted to by way of experiment, but not recommended with that confidence and assurance in which a physician feels warranted in favour of a remedy of known utility and importance. Nor is the practice in this particular much better established at the present time. We find, however, an exception in Mr. Charles Bell, who, in relation to this subject, observes "the tumour should be cut freely off; and after this, there should be slight and equable pressure." \* \* \* "When I say the tumour should be cut off, I should more fully express that pressure is absolutely necessary." This pressure should be sufficient to repress the growth and protrusion of the tumour, without being so great as to produce uneasiness, pain, or any unfavourable symptoms. This, however, must be obvious to every practitioner of ordinary discretion. Some have represented this mode of treatment as dangerous, but in the few trials I have made of it, I have not found it to be productive of the slightest inconvenience; whilst at the same time, it completely succeeded in suppressing the growth, and eradicating the fungus, after repeated removals of the tumour with the knife had failed. The manner in which this pressure should be made, is not perhaps material. I have myself made use of pressed sponge, agreeably to the advice of Dr. DUDLEY of the Transylvania University. A piece of lint, spread with simple cerate or basilicon, is applied next to the tumour, and a flat piece of sponge made to correspond with tolerable accuracy to the opening in the skull through which the hernia protrudes, is placed over this, and the whole secured with proper bandages passed round the head, and under the jaws, in such a way as the discretion of the surgeon may best dictate.

Previously to the application of this pressure, however, it will be necessary to shave off the tumour to a level with the skull, or rather to a level with its interior, concave surface, which may be easily done by causing the patient to keep his head in a depending position, whilst we are using the scalpel; by this position, the fungus, by its own weight and the pressure of the brain, is forced and drawn out to a greater length, and

lancet, through the meninges and the envelope of brain covering the effusion, without thereby giving rise to any untoward symptom.

we are thus enabled to remove it more completely. After this pressure has been continued two or three days, the excrescence will be found to have receded, and shrunk within the cranium, and in place of the tumour will be left a hole, or cavity in the brain. Upon observation, it will appear that the pulsation of the part has become much less considerable, corresponding with the healthy arterial action: so that the disposition to the formation of this fungus being subdued, the cavity has only to fill up with a deposition of healthy matter, fit for the various necessities and functions of the nervous system. We might here enquire in what manner does pressure act in removing and in preventing the growth of *hernia cerebri*? The removal appears unquestionably to be the result of absorption; and whether this is effected by veins or lymphatics is not material to the purpose. According to commonly received opinions, such a removal of excrescence would be ascribed to increased activity of the absorbents; but if we suppose what is equally, and perhaps more probable, that the pressure made upon the vessels controls and impedes the further deposition of morbid matter, the action of the absorbents remaining the same, will soon be adequate to the removal of the matter forming the fungus. However this may be explained, it is more interesting and important to know that the effect of pressure in preventing the growth of *hernia cerebri* is now well established to admit of any doubt. Sometimes these fungi may be suppressed and removed by pressure made with strips of adhesive plaster, drawn with a degree of tension over the tumour, and secured to the integuments on both sides of the opening.

A few weeks since I had a case of this description. It occurred in a negro girl, about ten years of age, who had been knocked down insensible, by a tree falling and striking her on the head. The skull was extensively fractured in every direction, and a portion of the parietal and frontal bones, about half the size of the palm of the hand, depressed and driven in upon the brain, and a small quantity of the latter escaped at the wound. The fractured pieces were removed, the depressions elevated, and the ordinary dressings applied. None of the integuments were removed, as was the practice of Mr. POTT, and the surgeons of his time.\* A few days after the accident, a

\* I apprehend that the practice of removing the scalp in cases of injury of the head requiring the use of the trephine, is not yet entirely laid aside. It is a little surprising that a surgeon of Mr. Pott's good sense should ever have recommended such a measure. Every consideration urges the propriety and importance of preserving the scalp, even in cases where it has been extensively torn and lacerated. In the first place, where the integuments are preserved, much time is gained in the healing of the wound; secondly, the cure is more

fungous protrusion took place at the point where the greatest injury had been inflicted, attended, as usual in such cases, with strong arterial pulsation of the part. In subduing the fungus, I employed no other means, than, at each dressing, confining a strip of adhesive plaster over the protrusion: in this way the hernia in a few days disappeared, and the child recovered.

Perhaps pressure may not be equally necessary and proper in every case of hernia cerebri. There may be instances in which even a moderate degree of compression might prove prejudicial. If any such should occur, they must be such as from the first have been attended with great constitutional disturbance, together with great local irritability of the part more particularly affected. Thus, two cases are quoted by Mr. Abernethy, one recorded by SCULTETUS, in his *Armentarium Chirurgicum*, Obs. XIX.; the other in the *London Medical Journal*, No. X. p. 277, in which repeated attempts were made to prevent the growth of the tumour by compression: one patient died at the end of a month, the other not until nearly six months after the accident. In the brain of each was found, upon dissection, a large cavity, which had been formed by the accumulation of a fluid that could not escape, on account of the aperture of the bone being closed by the tumour. I think, however, the reason of the failure in the two instances here mentioned is sufficiently obvious; since it appears, that pressure was used, without the precaution of previously cutting off the tumour; we are, therefore, not surprised that failure should have taken place; for it often happens that the local irritability and general irritation increase in proportion to the growth and extension of the tumour; and to apply pressure under these circumstances, would inevitably aggravate the disorder already existing in the nervous system. But by previously cutting off the fungus to a level with the interior concave surface of the skull, we at once remove a source of great irritation, and at the same time allow room for the exit of matter, should any have formed in the vicinity of the part. The tumour in this manner being removed, pressure might now be applied with a

perfect; for, instead of an ugly cicatrix, bare and naked, the sound integuments covered with hair remain, and no trace of the injury is left but a narrow seam. Nor is the removal necessary in order to facilitate the operation, or for the purpose of rendering the subsequent dressings more convenient: for whatever advantage may be gained in this way, will be entirely on the part of the operator, to the great injury and expense of the patient: and should any inconvenience arise from thus preserving the scalp, it is much better to make the incision and dissections a little more freely, than to occasion the irreparable injury of entirely removing the integuments over the seat of the injury.



reasonable and almost certain prospect of success. The length of time for which it may be necessary to use it, will depend upon the effect produced; the object being to restrain the morbid action, and to prevent the cerebral growth from rising above the proper level; thereby affording time for the membranes, which are here deficient, to form and extend themselves over the newly-organized cerebrum. It would seem that hernia cerebri has its seat not altogether in the superficial vessels of the brain, but at some depth beneath the surface; for when the morbid action which supports it is subdued, a considerable cavity occupies the seat of the tumour; this gradually fills up with a healthy organized deposite of cerebral matter. During this process, all applications, as washes, dressings, &c. to the cavity, should be avoided, and a simple plaster of basilicon applied over the opening, to protect the brain beneath from the action of the air.

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ART. X. *Method of treating Fracture of the Thigh Bone.* By WILLIAM C. DANIELL, M. D. of Savannah, Georgia. [With a plate.]

IN the summer of 1819, I was called into the country to see a child of Mr. Harboch's, about seven months old, whose left thigh had been obliquely fractured near the middle of the bone, by the nurse falling with him in her arms. I applied the many-tailed bandage with four thin splints about three inches long, to confine, as well as I could, the broken ends of the bones in apposition.

Upon visiting the child the following day, I found the fractured limb about the third of an inch shorter than the other, from the lapping of the ends of the broken bone. The patient being feverish, a laxative was directed. The dressings were renewed from time to time for about a week, when the feverish symptoms had subsided, and the child become in some measure reconciled to his confinement.

The shortening of the limb still continuing, rendered it necessary to adopt some means to counteract the contraction of the muscles, and retain the ends of the broken bone in apposition. The heat of the season, as well as the age of the patient, rendering the use of the ordinary splint, (Physick's improved Desault,) and bandages objectionable, I adopted the following mode of treatment: I passed a roller of muslin around the chest of the child several times, to which I attached a bandage on each side, and extended them above the head, and fastened them to the head-board of the bed. This was

done for the purpose of preventing the patient from being drawn down to the foot of the bed by the extending power. I then passed a small silk handkerchief around the ankle and foot of the fractured limb, and tied the ends together at the sole of the foot. To these united ends of the handkerchief I attached a small cord, which was passed over the foot of the bed, where it suspended a small weight which was designed for the extension of the limb.

The many-tailed bandage, with the four small splints, were continued as heretofore. In due time the broken bone united without any shortening or other deformity.

In 1824, and five years after the fracture, I examined the limb, and found it of the same length and appearance with its fellow.

Attributing my success in the above case to the manner in which I had treated the fractured limb, I became desirous of applying that mode of treatment to other cases of a similar kind. With the assistance of my friend Dr. RICHARDSON, I have recently treated a case of oblique fracture of the thigh bone after the following manner:—A piece of poplar plank, long enough to extend from just below the buttock to eighteen inches beyond the foot was made on the surface slightly concave to receive the thigh—the upper end was cut into a semilunar form to fit it the better to the buttock, and made six inches wide—the lower end was four inches wide. On each side of the lower end was attached a piece of board three inches high, extending up to the knee, with a gradually reduced height. A piece of board five inches high, was then fitted in the lower end, at a right angle with the lower board. In the middle of the upper edge of this piece was placed a small wooden roller, with a concave edge, which was retained by a wire axis. The lower end of this splint, which projected beyond the foot of the bed, was secured by passing a screw through the bottom piece into the foot-board of the bed. The fractured limb was then placed in this splint. The many-tailed bandage was applied over the fractured portion, (the bones having first been placed in apposition,) over which at equal distances a part and around the limb, four thin wooden splints, six inches long, were placed and secured by muslin strips. A bag of dried moss was then applied on each side of the thigh, and secured by tapes passing under the board supporting the thigh, and over the limb. A silk handkerchief was then passed around the ankle, and tied at the bottom of the foot. To this projecting portion of the handkerchief was fastened a small flaxen cord, and that passing over the roller placed in the end of the case, supported a small weight. A muslin bandage was passed around the chest to which bandages were fastened for the purpose of fixing the

body to the head-board to prevent its being drawn down. This was however soon found to be superfluous, as the weight of the body was quite sufficient for the purpose of resistance to the extending power, and was consequently discontinued. The dressings were renewed once or twice a week, according to circumstances, and the bones united readily, and without any shortening of the limb.

That portion of our patient's mattress which supported the breech was made removeable, by which arrangement the pan could be used without inconvenience.

Whenever any shortening of the fractured limb was observed, the leg was gently raised and extended to the proper distance, where it was retained by the weight attached to the cord. And here I will observe, that the cord and weight are rather designed for retaining the limb properly extended than for extending it. The latter it is known is readily performed. The importance as well as the difficulty of keeping up that extension, has been felt by every surgeon who has had a fractured thigh to treat. I flatter myself that the above mode of making and maintaining the extension, will be found an improvement. It has certainly been such in my hands.

Plate IV. figure 1. is a view of the splint case. Figure 2. exhibits the fractured limb in the splint case, with the many-tailed bandage and the small splints applied, and the extending cord and weights, but without the bags of moss.

It would be extremely difficult for any person who had not witnessed the treatment of this case, to appreciate the advantages which resulted from the mode which we adopted of keeping up the extension of the fractured limb. The patient could sit up in his bed without deranging the dressings. The only part in the use of which he was restricted, was the fractured limb. If in his movements he was thrown lower down in bed than was proper, he could draw himself up without deranging the dressings or displacing the fractured bones.

But the great and important indication that is fulfilled by this mode of treatment—and by this alone have I seen it properly fulfilled—is that there is a constant power in operation to counteract the contraction of the muscles of the fractured limb. That power is the weight suspended over the roller to the foot; and it is a power which from its constant action must necessarily exhaust the muscular contraction. Hence it never can occur where this mode of extension is properly applied, that the fractured limb will be shortened when the bones have united.

I believe that a weight of two pounds will in most cases be sufficient. My own experience however is too limited to enable me to



speak with confidence. It is a matter which the discretion of the surgeon will readily adjust.

In treating a fractured thigh bone, it has been deemed of the highest importance to make the extension and counter-extension as near as possible in a line with the fractured limb and the course of the muscles to be acted upon. The merit of Dr. Physick's improvement upon Desault's splint, consists in an approximation to this. It is, however, only an approximation. In the treatment of the case detailed above, the extension and counter-extension were necessarily in a line with the broken bone and the course of the muscles to be acted upon, because the extension is made upon the foot, and the counter-extension consists in the weight of the body above the thigh. Let it not be supposed that such weight is insufficient for all the purposes of counter-extension; I believe it will upon trial be found ample. If it should not, the body of the patient may readily be retained in place by bandages fastened to the head-board as suggested.

Some surgeons are in the habit, as soon as called to a fractured limb to place the patient to harness, and at once subject him to all the pain and distress of splints, bandages, extensions and counter-extensions. Such a course is I think to be condemned not only as unnecessary severity to the patient, but also as adding in many cases additional causes of irritation and fever. I have been in the habit myself of barely at first placing the ends of the bones in such a relation to each other as would prevent irritation—always feeling satisfied, if at the end of the first week, or even early in the second, every measure had been adopted which promised to promote a favourable union of the fractured bones. By this course the patient is gradually accustomed to his confinement, and bears much better the necessary restraints of the treatment than when he is at once subjected to the whole of them.

*Savannah, Georgia, 27th March, 1829.*

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ART. XI. *Remarkable Urinary Calculus.* By R. D. MUSSEY, M. D.  
Professor of Anatomy and Surgery in the Medical Institution at  
Dartmouth College, Hanover, N. H. [With a plate.]

THE calculus, of which fig. 3, Pl. IV. is a representation, I received in the autumn of 1826, from my friend Dr. SAMUEL NILES, of Post Mills, a small village in Thetford, Vermont, fifteen miles from this place. He informed me that he took it, soon after death,  
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from the bladder of Mr. Michael Comstock, a farmer, aged about sixty, who had resided several years in the same village with himself, and who died a few months before, with symptoms of vesical disease, which he presumed to have been caused by the calculus. He remarked that he found the bladder greatly thickened and inflamed. Being then in haste, I parted from the doctor without attending to a detailed history of the case, intending to possess myself of a circumstantial account of it at a convenient time. This, however, was the last interview I had with Dr. Niles, who, during my absence from this part of the country, the ensuing winter, suddenly died. After my return, I visited the village where the doctor and the patient had lived, and obtained of Mr. Daniels, a respectable and intelligent man, the following account of the case.

"Mr. Comstock, who had been his near neighbour, and with the state of whose health he had been acquainted for several years, died in April, 1826. A difficulty in passing his urine, of which he had occasionally complained for nine or ten years, had, in the latter part of that period, gradually increased. During the last year of his life, labour, especially at hoeing, greatly aggravated his pain in the region of the bladder. Four years before his death, he had a violent attack of pain in the region of the bladder, which lasted five or six days, and seriously threatened his life. He was subject, afterwards, to attacks of the same kind, varying in severity, and occurring, on an average, once in three or four months. The attack, of which he died, lasted about ten days, and during this sickness, his chief complaint was of pain in the region of the bladder. He was occasionally sick at the stomach, was feverish, and rested but little." Mr. D. remarked that he was "present at the examination of the body of Mr. Comstock, and saw Dr. Niles remove the stone from the bladder. The doctor took the stone with his fingers, from near the neck of the bladder, where it lay entirely unconfined." Mr. D. "saw the interior of the bladder, it looked very red. The doctor examined other parts of the body, but found no other appearance of disease."

The calculus was carefully sawn through its central portion, and examined by Mr. AUGUSTUS A. HAYES, a gentleman distinguished for his skill in analytical chemistry. The following account is in his own words.

*Physical Character.*—Colour, after washing, light hair brown. Surface frosted with minute white crystals; translucent, and appears of a yellowish-brown by transmitted light. Its lustre, when broken, is shining, and the recent fracture, presents, with the microscope, facets of minute crystals. Its fracture exhibits its structure, which is derived from concentric layers, presenting shades of hair brown, and leaving an irregular minute cavity in the centre, which extends through all its ramifications. At the point where the branches unite with the mass, the concentric lines correspond to their outer circumference.

*Chemical Character.*—In diluted nitric acid it dissolves slowly without effervescence, except a few flocculi of animal matter. The turbid solution, by evapo-

ration at a temperature equal to  $212^{\circ}$ , leaves a white pearly residuum; this exposed to a heat of  $300^{\circ}$ , becomes orange-coloured in parts. Diluted muriatic acid dissolves a minute quantity, and leaves it unaltered by evaporation.

"On platina foil, over a spirit lamp, it blackens, and evolves an animal and urinous odour, which ceases before the foil becomes red hot. If the temperature is raised to redness, it ignites and burns, (a character of importance when animal and vegetable matter exist in a state of mixture,) leaving a residuum presenting all the characters of lime in a pure state.

"A portion of the calculus was tested for phosphoric acid, by the process adopted by Berzelius; none was detected.

"A fragment after having been heated, was dissolved in muriatic acid, and the lime precipitated by oxalate of ammonia; by evaporating and heating, no fixed salts were obtained.

"From these experiments it is inferred that the calculus is oxalate of lime, mixed with animal matter."

The branched portions of the calculus, a cavity in each of them communicating with a cavity in the central portion, and these cavities containing animal matter, are circumstances which tend to remind one of zoophytic formations, and to lead to the conjecture that something like organization and a low degree of vitality may possibly have existed within these cavities. Be this as it may, the calculus is rare, and suited to excite curiosity.

While on a visit at the south, which occupied most of the winter of 1826-7, I had an opportunity of showing this specimen of calculus to a number of eminent surgeons and mineralogists, connected with the most distinguished medical institutions in our country, none of whom had ever seen or heard of any thing like it. Some months afterwards, Mr. CHARLES U. SHEPARD, of the mineralogical department at Yale College, had the kindness to write me, directing my attention to a description in the *Philosophical Transactions*, of a calculus somewhat similar, found in France about a hundred years ago. The following account of it is extracted from Martyn's *Abridgment*, Vol. 9, p. 172.

*Of a very extraordinary Calculus taken from the Bladder of a man after death. By the Marquis de Caumont.*

The Marquis de C. states that he was induced to send to the President of the Royal Society, the drawing of an uncommon stone, found lately in the bladder of a dead body, which he had engraved in his own presence. It is exactly conformable to the original. The most able physicians and anatomists assured him that they never saw any thing like it. He can vouch that the engraving, though very exact, does not come up to this singular work of nature; the ten branches of



which, spreading from the centre, have some resemblance to those of certain plants. It was a matter of difficulty to think, that the system of juxta-position, which is employed to explain the growth of common calculi, can hold good in this case. He dares not, however, advance, that vegetation has any share herein; though the shape of the stone, of the canals or papillæ, which seemed destined to convey the nutritious juices, in some measure favoured this hypothesis. He thought proper to join to the figure of the stone, an account of the patient's distemper, sent by Mr. Salien, surgeon of Lisle. The fact itself is curious, and may prove advantageous to lithotomists. They will understand, that in a similar case, no other method but the high operation can facilitate the extraction of a foreign body, whose branches must necessarily cause great lacerations, unless they found some favourable circumstances, and that the contexture of it were brittle enough to break it before being extracted.

*Mr. Salien's account of the above case.*—Joseph Dasse, of Le Thor, a small town at a short league's distance from Lisle, in the county of Venaissin, sixty-six years of age, of a robust constitution, a dealer in corn and cattle, having never complained of any indisposition, began, on the 14th of February, 1731, to feel some difficulty of making water, attended by a smarting about the glans, but was not detained from his pursuits. On March 28, 1732, he was seized with a true ischuria, which pained him much. Mr. Salien was sent for on the evening of the 29th, and drew off six cups of water, each containing a pint and a quarter. The patient got immediate relief, having no pains or fever, and thought himself cured. But the pains returning the next night, he removed to Lisle on the 30th, and had his water drawn regularly morning and evening, till April 15th, having, in the mean time, no pains nor febrile symptoms, nor did he lose flesh. On the 15th of April he supped as usual, but half an hour after was seized with a violent shaking fit, which lasted an hour, on which a burning fever ensued, attended with great thirst, head-ache, and restlessness. Mr. S. saw him at 8 P. M. his usual hour, and attempted to draw his water, but found an obstacle, viz. a stone obstructing the passage of the catheter. He turned the instrument to the left, and hit a branch of the stone; the surgeon then drew it back a little, turned it to the right, and hit another branch of the same stone, and arrived at the conclusion that there were several stones in the patient's bladder; and that, if the bad symptoms continued longer, there was no chance of the patient's recovery. The bad symptoms continued, hiccough came on the 20th, and the patient died the 28th.

The extraordinary figure of this stone may furnish matter of much

reasoning to philosophers to know how it could be formed in the bladder, and yet not be troublesome to the patient for so long a time, and what had given it so particular a figure, and so regular a shape.

*Sir Hans Sloane on the same case.*—The abovementioned stone is so singular, that among hundreds in the possession of Sir Hans, none could compare with it. Once he had a patient sixty or seventy years old, who had great difficulty in passing his urine, and besides was unable to sit in his chair without suffering pain in the region of the *peritoneum*. By the aid of soft medicines and waters, he voided by the urethra a stone flat in the middle and smooth, but had five points resembling the rowel of a spur. The points of the rays were sharp, but there were no asperities or crystallizations on their surfaces. It was small, so as, after many days, to pass along the urethra; but if it had not passed the neck of the bladder, but remained in it, in all probability it would have attracted matter to all the points or rays, and increased in all dimensions.

Fig. 4. Plate IV. is copied from the engraving of this calculus in the *Philosophical Transactions*.

June, 1829.

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ART. XII. *Reports of Cases treated in the Baltimore Alms-House Infirmary.* By THOMAS H. WRIGHT, M. D. Physician to the Institution.

CASE I. *Chronic Laryngitis.*—Margaret M'Carthy, aged forty-two, naturally robust constitution, was admitted, May 10th 1827.

*Symptoms.*—Respiration sonorous, and somewhat laboured, but not painful; voice a hoarse whisper; no fever; cough occurring in paroxysms somewhat severe, without expectoration; pale countenance; not much emaciation; no particular debility, nor other signs of general bad health. In February preceding, she had been attacked by symptoms of croup, as she reported, and was dangerously ill for many days. She recovered slowly, with the alteration of voice, embarrassed respiration, and cough, above described, which symptoms continued ever since, and had undergone occasional exasperation, by cold, fatigue, and other disturbing causes.

The patient had been but a short time in the infirmary, before an acute attack of her disorder supervened. She had been out of the ward for a few hours in the day, and at night complained of feeling

chilly and unwell; in the course of that night her breathing became difficult and painful, with a feeling of great stricture across the top of the thorax; inspiration was impeded, and soon became extremely laboured and anxious, attended by a loud and peculiarly harsh croaking sound, which was audible in every part of the hospital. A paroxysm of coughing occurred at intervals, and distressed the patient very much; it was abrupt, renewed rapidly for some seconds, and of a sharp thrilling kind, as of air forced with great impulse through a tense, narrow passage. There was no expectoration, except that sometimes after great effort in coughing, a considerable quantity of colourless, ropy fluid would be suddenly thrown off, by an act of strong expiration, amounting nearly to vomiting. The patient's countenance was pale, and betrayed much distress. Pulse small, quick, and soft; temperature of the body rather low.

The treatment of this severe paroxysm, consisted in the exhibition, at intervals, of the camphorated julep, with tinct. opii and æther; liberal demulcent drink, an epispastic to the thorax, and a light, warm cataplasm of flaxseed, chamomile, and spirit of camphor to the front of the neck, with bottles of hot water to the lower extremities. The symptoms of cynanche anginosa gradually passed off, and in forty-eight hours the patient was in her previous state, except some general debility. Paroxysms similar to the one just described were frequently renewed, commonly ensuing to some exposure or change of weather. In the course of three months she suffered not less than six or eight such attacks—usually of thirty-six or forty-eight hours duration—without any sensible impairment in the intervals of her general state of health; the paroxysms always breaking up with a discharge of large masses of uncoloured gelatinous matter. Great efforts were made to alter the state of parts which kept up the liability to those sudden attacks, with their train of terrible symptoms. The patient was put on a guarded mercurial course; small doses of calomel in combination with guaiacum and cicuta; with the employment, as liberally as possible, of tartarized ointment, over the upper region of the chest, and a succession of blisters kept open in front of the trachea; her diet was regulated, and bowels kept soluble. Once or twice her mouth was rendered slightly sore by the calomel, and during the continuance of that impression, the patient thought her breathing was much more free; but one or two severe seizures occurring after what was considered a full trial of mercury, it was withdrawn altogether, and various means afterwards employed. The plan of counter-irritation was frequently renewed, and having sometimes procured great advantage from the steady exhibition of copaiba, in the atonic forms of bronchi-



tis and catarrh, an emulsion of that article was employed in the present case after the mercurial alterative experiment was given up.

While under the balsam course, with counter-irritation externally, the patient had less cough, enjoyed longer immunity from acute attacks, breathed better, and was in many respects more comfortable; but still her voice was rough and stifled, and slight impressions of cold or damp brought on some degree of that harsh, stridulous, croaking kind of inspiration, which became so exalted and predominant in the severer paroxysms. On one occasion, when this woman had been in the yard of the alms-house, after a day of cold rain in August, she was affected at night with the usual symptoms of a suffocative attack. In this instance, the bad symptoms exceeded their common intensity; the usual palliatives, diligently applied, failed to give relief, and the patient expired suddenly, in twelve hours from the incursion of the paroxysm.

*Examination eight hours after death.*—Along the anterior surface of the trachea, somewhat on its left side, were a number, five or six, round bodies, from the size of a pea to that of a marble, lying loosely. Those bodies were of dark colour, part quite black; from their place and manner of distribution, they appeared to be the external bronchial glands degenerated. They were of soft pulpy consistence, the black bodies of the same colour within as on the outer surface. At the great division of the trachea, directly in the bronchial angle externally, appeared a round body, of dark red colour and considerable magnitude, about the size of an English walnut, the mass was dissected out, and felt firm and heavy. On attempting to cut through the middle of the body, its complete division was prevented by the resistance of a hard substance within, and a partial section only made. The body now presented a three-fold constitution; the external matter, for a quarter of an inch was dark red, then a layer of greater thickness, quite black, while the centre of the body was a hard, white, calcareous substance, supposed to weigh one drachm. The whole mass, like the bodies along the line of the trachea, seemed to be a morbid enlargement and conversion of the small glands usually occupying the external bronchial angle.

The interior of the trachea was very pale, except just before its branching, where there was a florid patch, an inch in extent. The inner surface of the rest of the tube, up to the thyroid space, was not only without colour, but its mucous membrane so thin that it could not be certainly distinguished, and the cartilages seemed without any regular interior covering; nothing of the sort appearing, except a few filaments stretching across from one ring to another; yet there were

no marks of distinct ulcerous waste in any part of the tube. There was no fluid of any kind in the trachea, until opening its primitive branches; these were found filled with the same ropy mucus which the patient had occasionally discharged in former attacks. The mucus found in the bronchial tubes was of brownish colour. The posterior part of the trachea, opposite the thyroid cartilages, was of almost cartilaginous firmness, and more than an eighth of an inch in thickness. The interior capacity of the trachea between the thyroid cartilages was very much contracted, leaving a triangular chink scarcely sufficient for the passage of a straw. The space of the larynx above the thyroid cartilages was also greatly narrowed, by thickening of the lining membrane, and more particularly of the reflection forming the rima, (the borders of which were hard and chord-like,) and the covering of the ventricular portion or appendages of the larynx.

The lungs appeared sound. They were throughout expansible and crepitous, but heavy and dark coloured, showing great venous congestion. The patient died, probably, rather of suffocation from the loaded state of the bronchial tubes and cells, complicated with strong spasmodic irritation of the larynx, than from any acute derangement or lesion. The mucus with which the bronchial passages were all filled, up to the great division, was so viscid that none of it would flow out by gravitation, and only small portions could be extracted mechanically.

*CASE II. Chronic Carditis. Hypertrophy with Condensation.*—Anne Lee, twenty-six years of age, near six feet tall, of good proportions, rather pale, but not sensibly emaciated, was admitted June, 1827. She represented herself to have been as well as common for years previously, until April last, when her menses were missed, and from this cause, as she supposed, her health had declined.

*Symptoms.*—General system. The temperature of the surface natural; skin soft; pulse 85, very small, not sensibly irregular or unequal; no fever or rigors; countenance pale; complexion a little sallow; eyes clear. Encephalon. No head-ache or vertigo; senses perfect; mind calm. Gastric system. Tongue clean; slightly lymphatic in the centre; no decided character of irritation; stomach not deranged in sensation; no morbid sensitiveness about the epigastrium; appetite commonly good; bowels regular; dejections scanty. Thorax. No cough; respiration small, but easy in general, the same when lying, sitting, or standing, but quicker after walking or any effort, and checked suddenly, but not painfully, on attempting full inspiration;

no pain in the region of the heart, or the muscles of the chest or arm, and the patient could lie on either side, but preferred the left. Abdomen. Belly rather full, too prominent or rounded at the sides, slightly tense, not generally tender; sensibility greatest in the left hypochondrium, as if from a degree of splenitis, or of morbid tenderness in the left portion of the transverse colon; no defined hardness or volume in the part. This was the only acknowledged seat of soreness or pain about the body, and uneasiness, sometimes amounting to pain, was generally felt here, and frequently referred to by the patient. The region of the liver bore pressure well, which did not betray any unusual evolvment of that viscus. Pelvis. Menstruation suspended; no pain in that seat; urine scanty and high coloured, but voided without pain or irritation.

In this groupe of symptoms there were no explicit signs of predominant embarrassment in any of the great organs or systems; the case resembled very much the common chlorotic character of disorder, so often attendant on catamenious interruption. Yet it was at the moment suspected that there existed serious chronic derangement in some seat of primary importance, and that the foundation of such derangement was independent of the cause assigned by the patient, and had been laid long anterior to the time to which she referred the origin of her complaints. This suspicion was founded in part on the general aspect of the case, but mainly on the remarkable smallness of the pulse, the very limited scale of ordinary respiration, and the sudden check uniformly opposed to every attempt at full inspiration. What was the true nature of the constant embarrassment of the circulation and breathing, was, however, a question of much uncertainty.

*Treatment.*—The patient was put on a tonic and alterative course, to give new impulse to the suspended or failing functions, and to check the proclivity to hydropic infiltration. Calomel was given in small doses, combined with squill, rhubarb, and pulv. canell. alb., and the patient directed the use of an infusion prepared with a view to excite more efficient action of the bowels and kidneys, but containing a proportion of vegetable bitter,\* to prevent depressing or disabling effects, on the digestive organs; the use of the infusion to be regulated, in its dose and repetition, by the correspondence of its effects with the general design of its exhibition. Daily friction on the trunk

\* The preparation so highly commended by Mr. Abernethy in one of his earliest publications on the means of correcting chronic errors of the digestive function, viz. gentian, senna, supertartrate of potash, and an aromatic aqueous infusion, used daily to moderately free catharsis.



of the body, chiefly over the hypochondriac and lower pectoral regions, with a mild rubefacient, were also employed.

The patient's mouth was rendered slightly sore by the calomel at the end of a week; the flow of urine had become free, and the œdema of the lower limbs was now scarcely apparent; the patient's spirits and appearance more enlivened. The calomel was withdrawn in a few days after its action became manifest, the bitter cathartic infusion was continued so as to keep up regular and free operation of the bowels. She continued to improve in strength and appearance, though the pulse and breathing betrayed a similar embarrassment as at first, yet from the decline of anasarca, increased vigour of body with rest, and regularity of life, the respiration was less distressing to the patient than formerly. As the catamenia had not returned, after six weeks stay in the infirmary, the tonic gum pill\* was directed for the patient. She had now recruited so much as to sit up all day, walking the ward at her pleasure, and engaged in light work, knitting, sewing, &c. Such was the state of the patient at the end of eight weeks from her admission. At this time, after having been out of the hospital for some days, she was attacked in the evening by chill, followed by fever, cough, acute pain in the upper middle region of the thorax, and very confined respiration; symptoms betraying the invasion of pneumonitis. In the fever ensuing to the chill, her skin became hot, head painful, face pale and appearing swelled; pulse very quick, thread-like, and readily interrupted by pressure. The patient was restless and agitated, and could not lie down without insupportable oppression of breathing.

From the depressed expression of the patient's countenance, and the uncommon character of feeble movement in the pulse, general blood-letting was omitted. A full dose of calomel, with antimonial powder, and the compound powder of ipecacuanha, Dover's, was exhibited, with the design to allay constitutional irritation, and induce an efficient secreting function of the mucous passages and skin. To favour the latter object, a dilute solution of tartarized antimony was ordered at intervals in liberal portions of warm barley drink. The night was passed badly. On the next day the patient was very weak, her face much swelled, infiltrated, with some colour, pulse quick, and thready, breathing laboured, intellect dull, inclining to stupor, cough less frequent, no expectoration. A large epispastic was ordered to the chest, calomel, camphor and ammonia in combination, every four hours, wine whey freely for drink. The day passed without sen-

\* G. Myrrh., g. fetid., terebinth. venet., sulph. ferri., ext. gentian.

sible alteration in the state of the patient; early in the night she became incapable of lying, as before, half recumbent; rose up abruptly in bed very frequently, in much agitation, and after a few paroxysms of very distressed breathing, sunk down and expired suddenly.

*Dissection.*—The head was not examined. Thorax. Immediately under the upper third of the sternum appeared a considerable mass of recent gelatinous, or lympho-gelatinous deposit, of pale yellowish colour; the surface of the mediastinum and pleura, and for some space around, exhibited the appearances of recent inflammation; the serous membranes of the chest, (except the inflammatory patch described,) as well as the pulmonary surfaces, in their common state; the right lung much shorter than natural; the heart, with its envelope, presented very full in front, occupying the middle region of the thorax, rather than the left side, and appeared, (from the volume and seeming fullness of the pericardium,) to be larger than common; the front border or margin of each lung, was tied to the sides of the pericardium by three or four distinct, strong slips or bands, of fibro-ligament, of evidently ancient formation; the bottom of the left lung cohered extensively, by old adhesion, to the diaphragm, and in a partial degree to the pleura costalis; the parenchyma of both lungs was sound, soft, and crepitous; both pulmo-pleural sacs contained a few ounces of water; the heart, enclosed in its sac, being raised up, felt particularly firm and heavy, and retained its cordiform shape, as if its chambers were filled by some solid matter, while its exterior surface was closely embraced by the pericardium. On making a longitudinal section, to divide the pericardium and expose the heart, nothing of the common distinctness of parts could be found. The pericardium not only cohered to the heart, but was consolidated, or identified with its substance. This union was complete and universal up to the roots of the great vessels. The heart was weightier than natural, and fully equal to the medium size of the bullock's heart. The left ventricle was empty, and remarkably circumscribed, not capable, by conjecture, of containing more than half an ounce of fluid. Its thickness was rather more than an inch, its internal surface of natural appearance; the root of the aorta not sensibly hypertrophied; the semilunar valves soft and natural. The left auricle was of natural size, darker coloured than usual, firmer in its wall than common, but retaining a good deal its soft sacciform character; the mitral valve healthy. The right ventricle was smaller than common, less collapsed than in its natural empty state, no coagula in its cavity, its parietes very firm and thick, like the mass around the left ventricle; the root of the pulmonary artery and its valves sound. The right auricle was

uncommonly prominent and rounded, and of particularly purplish-red colour, much darker than the rest of the heart. Its wall was half an inch thick in every part, its cavity did not collapse when cut open, and its whole interior was black and ragged, with short flocculent masses hanging from all the inner surface. The inside of the auricle represented a rough ulcerous cavern smeared and blackened with grumous blood. There were no traces of purulent or sanio-purulent fluid in the cavity, and only a few flakes of dark fibrinous matter. When the auricle was cleaned out, its interior surface still exhibited a perfectly ragged, (for want of a better term,) ulcer-like appearance. The tricuspid valve was found entire, but was undergoing calcareous degeneration. On being handled, its chordæ tendinæ cracked and broke to pieces between the fingers.

Stomach healthy; remarkably small size, not more capacious than an equal extent of the colon. Spleen somewhat enlarged. The intestines and peritoneum natural, except a very blanched and bloodless appearance; some water in the peritoneal cavity, the abdominal aorta preternaturally small. The liver did not occupy more abdominal space than is common, but was twice its natural bulk; and from some cause not apparent, had ascended in the direction of the left thoracic cavity, pressing the diaphragm before it, and occupied fully half the space of that cavity; hence the compressed and shortened appearance of the left lung, before noticed. The liver, though hypertrophied,\* bore no particular mark of disease; the gall-bladder was small and contained a thin pale green fluid. The kidneys, uterus and bladder, natural, the latter of very small size. The ovaries on both sides were converted into a mass of tuberculations, imperfectly suppurated. There were some remains of chronic ulceration in the vagina, the clitoris morbidly enlarged, and part of the labiæ internæ demolished by former ulcerations. Both groins exhibited scars from ancient buboes.

Taking the strong traces of former syphilitic ravage into account, there seems ground for suspecting that the thickening and softening of the right auricle, and the singular ulcer-like raggedness within that chamber, were consequent on constitutional contamination of lues. I have occasionally met with reports of soft fungoid vegetations in the chambers of the heart, referred to venereal origin, but I have not in recollection any account of degenerescence in the cavities of the heart, similar to the instance here reported. It is remarkable that

\* Tiedemann and Gmelin have remarked, that in diseases of the heart, the liver is enlarged.



the carditis in the present case should have gone to such an extent without having caused fatal disturbance in the function of the organ, and of the general economy; and it is farther surprising, that such a disease should not have been attended in its development by symptoms of suffering and illness, sufficient to enable the patient to refer to the time and the circumstances of its active predominance; she could not, under particular examination on the subject of her general health, in the first instance, be brought to remembrance of any illness for an indefinite period before coming to the Alms-house. It would seem, however, that even carditis may sometimes observe a course of slow chronic consummation, without involving any peculiar or pressing crisis.

The acute inflammation invading part of the serous membranes of the chest, appears to have lighted up a degree of irritation which the morbid state of the heart rendered it unprepared to meet, and incompetent to sustain. The defect, both of capaciousness and power of dilatation in the chambers of the heart, with the want of sufficient contractile energy in the whole organ, were the probable causes of fatal embarrassment in both systems of circulation; and thus the occasion of sudden death.

CASE III. *Aortal Aneurism, with Rupture into the Trachea and Esophagus.*—Henry M'Claskey, admitted December, 1827, age fifty-four, short stature, form muscular and heavy, with marks of great natural strength. The leading symptoms, at the time of admission, were cough, and a constant sense of weight in the chest, increased on exercise, and causing labour of breathing after any considerable effort. The cough was hoarse and dry, without expectoration, not very frequent, not commonly excited or increased by deep breathing, the sense of weight in the chest constant, rather disagreeable than distressing, and not at all impeding lying down or walking about moderately. The patient represented his present symptoms to have come on about three weeks before, previous to which time he was, or believed himself to have been in good health, had been seldom sick, led an active life, and was free of any aptitude to cough, or other disorder.

There was no fever, nor feverous temperature of the skin. Examined for many days together, the pulse betrayed no sensible fluctuation; it was sixty-five to seven; soft without volume, requiring pressure to distinguish it well, and not resisting with any energy of stroke; it was both a weak and sluggish pulse, though the latter is

usually characterised by some force. The general state of the system corresponded with the torpor of the circulation; the man kept his bed, was silent, and seemed indifferent to every thing about him, his usual position supine, countenance dull and drowsy; when asked respecting his state of feeling, complained of annoyance by his cough, and of the sense of weight in his breast, spoke little, rather abruptly, and always in terms implying despondence of getting better.

There were in this case but faint indications for diagnosis,\* or prescription. Chronic pulmonary embarrassment was suspected, but of what particular character was uncertain. No leading indication presenting, a palliative course only was prescribed. For many days the patient remained as when admitted. He ate all that was given him, slept great part of every night, and frequently in the day, yet always expressed himself uncomfortable, and denied any improvement in his sensations. Diarrhœa was prevalent in the Infirmary when this man was received, and in a week after his admission he was affected by that disorder, which caused him much inconvenience, and seemed to aggravate his cough, chiefly perhaps by causing him to leave his bed frequently, to go to the privy. One morning, in the fourth week of the man's stay in the Infirmary, while we were making the usual tour of medical duty through the ward, this man came out of the privy closet, (a small apartment at the end of the ward,) and ran toward his bed, coughing very hard. In the next moment, the sound of violent vomiting was heard, which attracted our attention, and caused us to repair instantly to the spot. M<sup>r</sup>Claskey was lying on the side of his bed, vomiting blood in torrents, and was lifeless in ten seconds.

*Examination.*—No extravasated blood in the general cavity of the thorax. The right lung extremely dilated, filling the whole right cavity of the chest, of a deep purple hue, and engorged to the utmost possible degree, not from vascular congestion, but complete injection with blood, of all the bronchial passages and cells, to their minutest divisions; no artificial inflation of the lung could possibly have caused a more perfect display of its expansive capacity. The left lung was not at all dilated, and exhibited no unusual colour.

The heart viewed in situ, gave but a very partial representation of the nature of lesion, some appearance of a pouch only presenting just beyond the arch of the aorta. The trachea and œsophagus were divided

\* It proved afterwards that the stethoscope, (which I have to acknowledge the error of neglecting to employ in this obscure case,) must have plainly revealed, at least one decided character of lesion in part of the thoracic organs.

above and brought down, the membranous connexions around the thorax and to the spine separated, and the heart and lungs taken out together. Being now inverted, the state of the parts was readily traceable. At the deepest posterior part of the arch of the aorta, an inch and a half below the root of the left subclavian, was an aneurismal sac, the size of an egg, its parietes soft and apparently very thin. This was plainly the source of the hæmorrhage, and to trace its communications, the sac was slit open through its greatest length. The coats of the artery, (within the limits of the sac,) were very thin and tender, and tore rather than cut when laid open; the sac was empty, except a few delicate layers of soft coagulable lymph. Passing the finger into the sac, it encountered three or four hard, rough, pointed bodies, on each side, within the aneurismal cavity, which were the extremities of three broken rings of the trachea; the points were thin and sharp, as if wasted, and had a roughness, hardness, and brittleness, more of bone than cartilage. The communication with the trachea, and the cause of bloody insufflation of the right lung, were thus explained; it remained to ascertain why the fatal hæmorrhage had occurred in the form of a violent and repeated gush by vomiting. When the œsophagus was now detached from the trachea behind down to the borders of the aneurismal sac, it was found to be united by adhesions both with the diseased portion of the trachea and a part of the aneurismal bag; a farther separation of the œsophagus from the trachea, disclosed an oval opening, in the former, large enough to admit the point of a finger, by which the œsophagus communicated with the trachea, just behind where the rings of the latter had given way, which was pretty low on the left side of the trachea. The coats of the œsophagus were very much attenuated over the whole extent of its adhesion to the trachea and sac, and the rent described communicating directly with the current flowing into the trachea after rupture of the rings; the blood seems to have passed freely also, by the route to the stomach; hence its discharge by distinct acts of full vomiting. The stomach contained after death about a pound of coagulated blood.

It has been mentioned that the left lung was not dilated, or changed in colour, &c. The cause of this difference in the two lungs, was explained while removing the parts from the cavity of the chest. The left lung was found to adhere with great firmness throughout its whole anterior, lateral, and posterior surface, to its own pleura, and by that to the serous membrane of the ribs. The lung was enlarged very much, firm and heavy, and in its whole substance hepatised to so great a degree, that every trace of bronchial tubes and cells was wholly ob-



literated up to the point where the left bronchus penetrates the lung by its primary branches. From this point there was no channel by which air could enter the lung, and for that cause, the extravasated blood was totally excluded.

This lung had evidently been long out of the service of breathing, and as its cohesion and condensation was clearly the work of inflammation, and that probably of no indolent character, it is inexplicable how the unfortunate subject of the case could have been so unconscious as he appeared of any former morbid state of his lungs, and so fully impressed with the belief that his health was perfect till within four weeks of his coming to the Alms-house. The case in this respect adds another to the numberless admonitions, derived from hospital practice especially, how little confidence can be placed in the account which patients give of their general state of health, even where there is no reason to suppose the smallest intention to deceive. It was to the state of the left lung, as represented, that allusion was made, when it was remarked that the stethoscope might have clearly indicated one important feature of diagnosis, in the investigation of the seat, &c. of lesion, about the thoracic textures. The respiratory murmur, indeed every sound which respiration gives by mediate auscultation, was of course wholly extinct over the entire front, side, and back surface of the chest, corresponding to the outline and body of the left lung.

CASE IV. *Gangrena Necrosis, with peculiar Arterial Degeneration.*—Margaret Cash, aged fifty-six, admitted October 20th, 1827. This patient came into the house with diarrhœa of an aggravated character; frequent painful dejections of the muco-gypseous kind, frothy, ash-coloured and glutinous; severe enteralgia, soreness in the right hypochondrium. The general symptoms were indicative of much constitutional disorder, but did not betray any urgent danger. There was no head-ache, no cough or pain in the breast, breathing natural, temperature of the surface moderate, tongue white, no particular thirst, stomach quiet with indifference to food. The pulse was about ninety, small, sharp, and irritable; in the left arm the pulse was barely perceptible to the most careful examination, and so faltering as to be extinguished by the least pressure; temperature of the left arm and hand sensibly less than in the right; no other difference in the two arms, except that the power of voluntary contraction was less in the left hand than the right. The patient was still, spoke seldom, seemed listless and unconcerned, yet without tendency to stu-

por, or any manifest fault of intellect. The predominant signs were intestinal and hepatic irritation, with augmented excitability, and deficient tone of action in the vascular system.

To calm irritation of the bowels, restrain the wasting discharges, and improve the excretions, a mild aperient, *ol. ricini*, gum arabic, and sugar in emulsion were exhibited, to which was added a few drops of laudanum; and succeeding the operation of the emulsion, small doses of calomel were directed at intervals of six hours, combined with a few grains of chalk, pulverized gum arabic, half a grain of *ippecacuanha*, and one-eighth of a grain of opium. The urgency of diarrhœa, and its debilitating consequences, requiring early restraint, an occasional dose of chalk julep was afterwards added. The patient was kept strictly on our hospital regimen for diarrhœa—for breakfast and supper, equal parts of milk and water, boiled lightly, with a portion of toasted bread or biscuit—for dinner, rice jelly sweetened—common drink, mucilage of rice or barley. By these measures steadily pursued for some days, the number of movements was reduced to four and five in twenty-four hours, less than half the number commonly occurring at and before the period of admission.

The patient's general state was not amended in correspondence to the lessening of diarrhœa, pain, &c. She continued languid and dull, with rather increasing signs of lowness; her pulse in the right arm, still small, sharp, feeble, and more frequent than at first; in the left arm there was now no pulse; the left forearm and hand cool, even cold, to the touch, while the rest of the body was warmer than natural; the patient always drowsy, yet sensible when roused. Some irritability of the bowels remaining, motions too frequent, and the evacuations brown yellow colour and soapy consistence, the *hydr. cum cret. et op.* &c. was continued, and the infusion of *cort. ulm. rubri* ordered, the latter agent having been found in very many of our cases of chronic diarrhœa, to exert a salutary influence. The diet was made to correspond with the design of support, as far as the state of the symptoms and the almost total indifference of the patient to food would permit.

Ever since the patient's admission into the infirmary, she had complained of pain in the inner side of the left arm, a little below the insertion of the tendon of the *teres major*. Nothing appeared at the place indicated, to explain the cause of pain there; the part was sore to the touch, but neither swelled nor inflamed; the soreness extended an inch or two up and down the arm, in the track of the brachial artery. At the end of a week from her entering the ward, the pain of the arm, and soreness to handling, had almost entirely

disappeared, but the patient was then sensible of total loss both of power of movement and sensation in the left hand. That hand was quite cold, and on the tenth day a faint bluish tinge was discovered over all the fingers, the colour permanent, and not varying by pressure. The discoloration of the fingers became deeper every day, spread slowly, first up the back of the hand, then through the palm, and by the sixth day from its appearance, had reached the carpal articulation all round. The fingers, up to the metacarpal junction, were now evidently lifeless; they were cold, black, and unpliant, yet not at all sphacelated, nor showing any vesiculation, or other marks of putrescent decay; nothing like separation of parts was manifested; the blackness was lost indefinitely, by a fainter shade in the adjacent skin. The forearm next showed the same character of lividness, first occurring to the fingers; but on the arm the expression was different; here it appeared in the form of purpura, in blotches at distinct points on the arm, chiefly on the back of the arm, from the wrist to the small head of the radius. The blotches were large, irregular in form, and in a few hours after their appearance some of them became slightly vesicular or bullous, the cuticle being somewhat raised by sero-sanious extravasation. During this change in the condition of the arm, there were no marks of that low, topical, inflammatory action, which accompanies gangrena sphacelus; the arm neither swelled nor became hot. The death of the limb seemed to be taking place in a manner purely passive.

As soon as the livid tinge was perceived on the fingers of the left hand, the patient, notwithstanding the continuance of general febrile irritation, was put on a decidedly sustaining course; the quinine was exhibited freely, with the cordial mixture, (sub. carb. ammoniæ, aq. menth. et tinct. cardamom. so much commended by Mr. COOPER;) opium and camphor were given at night, the first liberally; the hand and arm were kept enveloped in fomentations of bark and chamomile, charged with spirit of camphor and tincture of myrrh. The supporting plan, prosecuted regularly for many days, and varied according to circumstances, made no satisfactory impression. The powers of life gradually declined, stupor supervened, and the patient expired on the twenty-first day after entering the hospital. The discoloration of the left arm never spread above the elbow-joint, and nothing of gangrene, nor any petechial or purpurous spots appeared on any other part of the body; there was no gangrenous fætor about the arm. For more than a week before the death of the patient, the diarrhœa was inconsiderable.

*Examination.*—For the purpose of tracing better the state of the



arteries in the left arm, a pipe was introduced into the left subclavian, and the fine injection thrown in as fully as possible; the arm was then removed at the shoulder-joint. The artery and vein, (cephalica magna,) had a very unusual relation to each other. The former was filled with the injection as far as the bend of the arm; its course was very serpentine, and two inches below the root of the superior profunda, made a sudden curve, so as to describe a semi-circle an inch in diameter. This bend was apparently referrible to the state of the vein at that point. From the axilla downwards, the great vein was enlarged, and filled with semi-solid black blood; in two or three places above the doubling in the artery, the vein was dilated into distinct circumscribed tumours of moderate size, while at the place of sudden curvature in the artery, there was one of those tumours the size of a musket ball, and solid as if the contained blood was firmly coagulated. Round this great varix the artery turned close, to take afterwards its ordinary course to the bend of the arm. It was to this spot the patient pointed as the seat of pain in the arm. The external cellular coat of the artery exhibited a high red colour throughout its whole course, from the axilla to the bend of the arm; just above the turn of the artery round the great varix, its thickness was increased for the space of an inch, to more than three times its circumference in any other part. This enlarged portion of the artery was firm, and consisted not in aneurismal dilatation, but in general thickening of its coats all round, to one-third of an inch, by which its channel was very much diminished. The profunda superior was very much enlarged in its trunk, and involved at its branching in a plexus of veins, showing a number of varicose pouches filled with black blood.

The roots of the radial, ulnar, and interossea arteries, were full, round, and hard, apparently distended by injection; but it was found that the injection had not penetrated below the bend of the arm, and was stopped there abruptly by a plug of solid coagulum, which extended continuously through every trunk and considerable branch of the forearm.\* There was no earthy deposit in the coats of the humeral or proper brachial arteries.

The right arm was dissected without previous injection; the veins were large, but natural in appearance; no varices or other irregu-

\* The humeral artery was dissected out of the arm, and with it an inch or two of the branches in the forearm containing the coagula described; the concremented blood could not be pressed out, and now after twelve months maceration in dilute alcohol, the coagulum is perfect as ever, showing a deep purple hue of the branches as far as it extends.

larity. The humeral artery, with an exception to be noticed directly, was of ordinary appearance, and regular in its course. At two fingers breadth below the root of the profunda, the artery was suddenly enlarged into a bulbous body, somewhat oval in shape, and about the size of a large almond; its walls very thick and spongy, with portions of loose flaky matter in their substance; the centre of the tumour contained a little pus, and immediately around the pus was a substance resembling the matter of crude tubercles. The enlargement of the artery then was the effect of steatomatous degeneration in its coats, and the tumour which had been found in the left humeral artery was the same morbid conversion, less advanced. The canal of the right artery was not quite obliterated at the point of disease; it was pervious there, but the passage very contracted, and not through the centre of the tumour, but on the side next the bone, and very near the surface. Although the continuity of the tube was preserved, it is probable that little if any blood passed through the diseased part of the artery; the passage through the tumour was very confined, and the trunk of the artery, directly above and below the enlargement, had a shrunk and wasted appearance. The profunda was very full in its trunk, and divided near its root into five principal branches, three of the largest taking a course down the arm. It is probable that the forearm depended mainly, if not altogether, on the supply by the branches of the profunda, through the anastomotics; the state of the latter branches could not be satisfactorily ascertained, as the arm had not been injected. The cellular coat of the right humeral artery had nothing of that strong red tinge, which was very obvious over the whole trunk of the artery in the left arm.

The heart was much enlarged and flaccid; the right auricle uncommonly capacious; the descending and ascending cavas dilated in a very remarkable degree, before entering the auricle. The right ventricle was dilated, and its wall thin; the root of the pulmonic artery expanded in a pouch-like form, its coats attenuated, and the central points of its semilunar valves chalky. The left auricle as usual. The left ventricle large, flaccid, and thin. The coronary arteries hard and friable. The root of the aorta much dilated; at the arch swelled into a bag-like expansion, twice as capacious as the healthy form of the vessel at that point; its semilunar valves full of concretions. The enlargement of the aorta, more regular in figure, continued down the trunk through the chest and abdomen, and the whole track of the vessel, from the ventricle to the bifurcation, was studded with calcareous formations in large patches, smooth and firm, and as usual, lying between the coats. At the arch, the patches of cal-

careous matter were particularly large, two or three of the plates equal in surface to a twenty-five cent piece, and exceeding an inch in length. The carotids and subclavians did not show any degeneration of their coats; the veins of the neck were uncommonly large and distended with black blood. The lungs were sound, but unusually dark and heavy, from engorgement of the pulmonary veins. In the abdominal cavity there was no manifest lesion of any of the structures; the mucous coat of the small intestines showed some patches of slight phlogosis. The encephalon was not examined.

The appearance of the inferior extremities were natural.

It is a difficulty I am unable to solve, why there should have been distinct pulsation at the wrist in the right arm, and none in the left, and yet the degeneration in the coats of the right artery, the only obvious positive disease in either, more advanced, and more obstructing direct transmission of blood, than in the left. It is true, perhaps, that the main cause of slow mortification in the left arm, was more the consequence of diminished and constantly failing energy of life in the whole member, than of primary or mere mechanical interruption to supply of blood; but still why or how the occasion of this limited and local privation of living power?

CASE V. *Pneumo-hepatic Abscess.*—Daniel Crocker, aged fifty-two, was admitted August 1st, 1828, in a state of universal involuntary tremor, apparently of that temulent kind, familiarly called in the house by the term miserables or horrors; he was known to be generally intemperate, but denied that he had been lately intoxicated; reported himself long subject to occasional ague. This person was middle size; not emaciated; muscles soft; countenance wan; complexion deep sallow hue; same ochrey colour over the whole body; slight cough; breathing short, without pain; no head-ache; skin cool; pulse small; no fever; tongue clean; appetite good; belly prominent; right and left hypochondrium tender, without sensible organic evolution; bowels slow; urine scanty; no evident infiltrations.

*Diagnosis.*—Chronic inflammatory congestion of the liver and spleen, with symptomatic ague; anetus erraticus, or complicatus, of Good.

Ordered, calomel, pulv. Doveri, āā gr. x. at night; in the morning as purgative, ol. ricini et syrup rhæi. Medicine procured sleep, and the oil, &c. purged well; tremor abated; belly less tight, and patient felt better, though weak. Ordered, calomel  $\frac{1}{2}$  gr., rhubarb and Dover's powder, āā gr. ii. ter in die; friction with tartar emetic ointment on the right hypochondrium; diet milk and bread and rice



milk. The medicines and regimen were continued four days, in which time the tremulous movements passed off; no fever, the tongue clean, appetite good, patient cheerful, and felt better; a crop of small pustules came out on the side; no mercurial charge in the breath; on the fifth day, ague, (the first since coming into the ward,) occurred, held long, shook the patient very much, followed by moderate febrile movement. The paroxysm left head-ache and nausea. Ordered, an emeto-cathartic—jalap and ipecacuanha. Medicine operated upwards and downwards freely; patient complained much of its debilitating influence; some soreness still in the left hypochondrium; very little in the right except from the tartar pustulations on the surface. Ordered, the calomel, rhubarb, &c. as before, with addition of half a grain of sulphate of quinine to each dose; the diet was strengthened, no fever contraïndicating, to light animal broth and bread for dinner. For a weak there was no recurrence of ague; the patient's appearance improved and strength recruited; pain of the side was scarcely recognised on pressure; breathing natural, and the short cough existing on admission entirely lost; there was no display of mercurial action in the mouth. The man left his bed at this time, and engaged in light employment about the infirmary.

In a few days after, the fourth or fifth from his getting up, Crocker was again in his bed, looking very ill. His former tremor had returned violently; he complained of being both cold and hot for the last twelve hours; had pain of his right side, cough, difficult breathing, and head-ache. His face was flushed, (the first time it had shown colour;) tongue white; pulse small, quick, and sharp; patient attributed his illness to cold taken from general washing of the infirmary floor, the day preceding. Ordered, venesection immediately, quantity to be determined by its influence on the pulse, flush of countenance, pain, and difficulty of breathing, &c.; after bleeding, solution of sulph. magnes. with minute charge of tart. antim. at intervals, until purging and diaphoresis; an epispastic\* over the right hepato-pectoral region. Next day the patient better; breathing easy; pain of the side inconsiderable; pulse soft; general diaphoresis. The solution of salts and tartar had acted freely upon the bowels; the blood drawn, (about fourteen ounces,) showed firm coagulum, inverted border, and a coat of fibrin. Diarrhœa succeeded to the operation of the salts; the motions frequent and griping; discharges thin and yellow. Ordered, chalk in gum water, with a few drops of laudanum; patient's diet adapted to the state of his bowels. Though somewhat controlled

\* Perhaps better omitted.

by the treatment, the diarrhœa continued troublesome for three days, and broke the patient down a good deal; it then ceased, and left him free of other sensible disorder than weakness. There was no fever during the disorder of the bowels, and none ensued when the looseness was checked; the patient was quiet, looked pale and low, but was without pain, and complained only of feebleness. Medicine was now withheld, and it was attempted to support him by suitable alimentary measures.

This man's state was inquired into every day; he did not fall off, and gained but little. There was no fever and no pain; the bowels were too much disposed to action, and resort became necessary to chalk, ipecacuanha, and opium, as a night dose; this procured opportunity for sleep, and he seemed to improve. At this time, the seventh day from the acute attack of fever, pain, &c. as just described, the patient asked for a bandage for his body; on inquiring his reason for the request, he said to support his back, which felt so weak on his rising that he was unable to sit up. To particular questioning whether his back was painful, or swelled, or sore, at any point, he answered in the negative; nothing was the matter with the back, except weakness of the loins. Two days after, while we were going through the ward, Crocker rose up as we approached his bed, and the effort was followed by a sound resembling a sudden and forcible discharge of fluid from the bowels, which was at first supposed the occasion of the sound, but his shirt immediately showed a deep red tinge, almost to his shoulders, and on being held up by the nurse of the ward, his bed was inundated by a sanio-purulent matter, which still flowed in a stream, and with great force, from a ragged orifice in the middle of the back. The quantity discharged in a few seconds was not less than three pounds, colour brownish-red, matter thin, and without odour. The outlet of matter was about an inch from the spine, on the right side, and between the heads of the last and next false ribs; there was no inflammation of the integuments around the opening in the back. It was plain that the matter came from a great abscess of the liver, and mentioning my suspicion that the right lung was involved, I caused the patient to cough. At every effort, air rushed through the opening with sensible force, and loud crepitation. The part was dressed\* with bread poultice; panada, with a little spirit, was ordered, and an anodyne, the bark infusion with aromatics, and the dilute

\* I regret that the judicious plan, practised by Mr. Abernethy, of bracing the trunk moderately by a flannel roller, in cases of newly open hepatic abscess, did not come into my thoughts in the present instance.

nitrous acid, to be commenced next day, should there be no fever; diet light, but liberal and nourishing.

The attending students asked with much interest, if this man could get well, under so great lesion of important parts. The answer was, that he might recover if fever or irritation did not set in; an issue, to depend on the condition of those parts of the liver and lung, not directly involved in the abscess, and on the indifference which the constitution might manifest, to the state of the parts affected; the latter turning mainly perhaps on the original soundness of the habit, and its inaptitude to participate in the consequences of local irritation. The patient remained wholly free of fever after breaking of the abscess; his appetite increased, bowels recovered steadiness, and the tone of the general system improved daily. The discharge from the opening in the back diminished constantly, continued free of fœtor, and in a short time consisted entirely of a thin serosity; and even that ceased altogether in sixteen days from the rupture of the abscess, the orifice closing in firmly. In short, this man recovered perfectly in a very brief interval, and without a single bad symptom. The bark and acid were continued throughout his convalescence.

Crocker was dismissed the hospital, reported for light work, about the middle of October. In the second week of November he entered the Infirmary again very ill, reported himself to have felt unwell, with chills and feverishness, three or four days before applying for readmission. His symptoms on entering the ward now, were cough, pain of the breast, and difficult breathing, all increased on lying down. He had fever, quick sharp pulse, hot skin, and flushed face; belly rather sore generally, particularly tender in the right hypochondrium, especially in front along the cartilaginous border. The total signs indicated a threat of renewed hepatic abscess, apparently in the anterior portion of the liver. Ordered venesection immediately, a saline cathartic, to be followed by calomel, tart. of antimony, and nit. pot-ass, in doses designed to control excitement, without directly affecting the stomach or bowels, the diet exclusively bread, with milk and water.

For three days succeeding the patient's readmission into the ward, he experienced no relief from the bad symptoms; the signs of illness rather increased; cough was more urgent, pain of the side greater, and breathing more restricted. The fever continued without sensible remission, face constantly flushed, skin dry and hot, strength reducing. On the fourth day, symptoms as before; fever, cough, pain of the breast and side, embarrassed breathing, debility, anxiety of countenance, and restlessness. This day the seat of pain presented the fol-



lowing signs:—belly rather tight, right hypochondrium full and sore, a space in the epigastrium, just below and a little to the right of the end of the sternum, more tender than any other part, more full and prominent also than the adjacent region, and showing an evident blush of colour, two or three inches in diameter, not apparent anywhere else on the abdomen. The colour faded, and returned, on making or removing pressure, and the part had some degree of the thickened and glistening appearance characteristic of erythematous inflammation of the skin, over parts about falling into suppuration. It was now plain that the left lobe of the liver was threatened with abscess. Ordered a brisk purgative, the bowels being slow, leeches to the epigastrium; in the evening, pediluvium, five grains calomel, with ten of Dover's powder, at bed time; the calomel, nitre and antimony, to be resumed next morning. I was prevented seeing this patient again for forty-eight hours, and then had the satisfaction to find him much better; his fever was lessened, pulse soft, countenance calm and cheerful; pain of the side greatly relieved. The space in the epigastrium, which had been the seat of predominant soreness, had lost its extreme sensibility, the diffused redness, swelling, and other signs of active erythemoid inflammation of the cellular membrane and skin, had disappeared. The intelligent student with whom instructions had been left two days before, for treatment of the case in its then threatening aspect, not being able to get leeches to act efficiently, very judiciously substituted cups, and with these took blood as freely as possible from the principal seat of sensibility. The effect of this manner of depletion was very decided; it had a relieving and soothing influence, not only on the part, but over the whole system, inducing that peculiar relaxing impression and control, both over the pain and the constitutional feverous irritation, which cupping, and also leeching, often produce, in a manner and to a degree, far greater than can be referred merely to the amount of blood thus abstracted. The patient continued to improve, soon recovered entirely, has remained well since, (he is still on the establishment,) and is probably in sounder health now than for years before.

CASE VI. *Cynanche Laryngea*.—Samuel Morgan, aged forty-three, tall, spare person, florid countenance, light eyes and hair, admitted January 15th, 1829, suffering under the chronic consequences of what he termed a bad cold, contracted some weeks before. He was very hoarse, almost without distinct voice, short dry cough, not frequent, no pain in any part of the breast, no difficulty either in common breathing, or on making full inspiration. There was no fever in the

general, though the patient before coming to the Alms-house, had laboured under an irregular intermittent, which still occasionally recurred. The pulse commonly small, without frequency, and soft, tongue clean, appetite moderate, bowels regular, evacuations of ordinary character, no evidences of gastric derangement. The main features of the case, in short, were made up of the peculiar hoarseness, dry cough, and considerable general debility; tracheitis, now chronic, with some bronchial concern, seemed the primary and still predominant affection, to which all the other symptoms, the general debility, and probably the intermittent also, held a dependent relation.

The object of treatment in this case, was gradually to divert, or break up, chronic inflammatory irritation of the bronchial mucous tissues. For that purpose various alterative means were employed, generally calomel in small doses, combined with Dover's powder, occasionally with hyosciamus and cicuta. The sarsaparilla ptisan was also used, and an emulsion of gum ammoniac, syrup of squills, and seneca infusion, exhibited as an expectorant. Local treatment was instituted concurring with the general design; stimulant embrocation was made on the throat, and counter-irritation maintained over the top of the chest, by a compound of the tartar ointment with hydriodate of potash. Under the treatment the man improved regularly though slowly; after some weeks he had recovered his voice, lost his cough and intermittent, and regained in considerable part his flesh and strength. At his own request, he was reported for work, in the second week of February.

On the twenty-fourth of the same month, twelve days after being reported for work, I found Morgan again in the hospital. He was now acutely ill; his face flushed, of a purplish hue, countenance betraying great distress, breathing slow and difficult, often causing a struggle for breath, in which he would raise himself on the bed, throw his head back as far as possible, and bring into forcible action every muscle concerned in opening the chest for admission of air. Just before and after one of those severe struggles for inspiration, he made violent efforts to throw off masses of ropy mucus which seemed to fill the posterior fauces, and choke the passage of the larynx. The entrance and expulsion, particularly the former, of air through the larynx, was attended by a loud sound, of that peculiar rough, ringing character, sometimes called metallic, so eminently characteristic of extreme spasmodic or inflammatory narrowing of the apertures of the glottis and larynx. The acts of swallowing was somewhat hindered and painful, though far less embarrassed than the respiration. The external aspect of the throat, not less than other symptoms,

showed the character, and in some degree the extent, of the affection which had brought the unfortunate patient into so much distress and danger. The body of the larynx in front, with the corresponding portion of œsophagus behind, were swelled out into a globular form of much more volume than the natural state of the parts, the surface of the tumour, and the whole front of the neck, having the same dark red hue as the face, and the enlargement possessing great hardness and sensibility to the touch. The pulse was small, quick and weak, having neither tension nor firmness. The report furnished by the resident students was, that the man had been brought into the ward the night preceding, with the symptoms just described, but of less intensity; that he was then chilly and depressed, and seemed incompetent to bear active treatment by direct depletion, but had been freely vomited, and had taken a mercurial cathartic.

The case in all its circumstances had become of pre-eminent urgency, and admonished of his peril by his sensations, the poor man was constantly declaring that he must die if not relieved in a few minutes. The pressure and the source of danger in the case, were sufficiently obvious, and yet the choice of expedients by which to turn it aside, was not without difficulties. Here, perhaps, was a fair occasion for the exercise of that laudable rule of professional conduct, which measures its boldness by the magnitude of its object, and pursues an indication of primary importance or positive necessity, by the surest means in the shortest time. The embarrassment of respiration was rapidly deranging the functions of life, and leading to serious failure of the powers of the whole system. A more free supply of air was the plain demand of the case, and it was but to look at the patient's struggles for breath, to have the expedient of tracheotomy suggest itself for adoption. It was determined first to put in practice a different plan. The smallest size cupping-glasses\* were directed to be instantly applied, free incisions being previously made over the surface of tumefaction, above and around the larynx. Aware that the cups might add temporary increase to the difficulty of breathing, they were applied singly, and in as quick succession as possible, leaving in each instance the front of the larynx free and the cups chiefly on the sides. The patient's breathing was a good deal hindered by the first cup; he bore the others better, and after the operation was concluded, we had the satisfaction to hear him acknowledge his feelings

\* From the state of cold at the time, our leeches would not have acted; and in a case like the present, or any one of peculiar local urgency, I would give decided preference to the cups.



sensibly more comfortable; he breathed more deeply, and with less sound, and also swallowed with more facility. A light dressing was put on the neck for the present, and a draught directed for the patient at short intervals, composed of infusion of seneca, tartrate of antimony, in small portion, oxymel of squills, and camphorated tincture of opium. It was farther directed that the patient be made to inhale frequently and freely, the vapour of hot water, in which chamomile and serpentaria were infused. If the symptoms continued unmitigated after some hours, an active vesicatory to be applied to the throat, and a liberal dose of calomel and Dover's powder to be given at night.

The patient, though much less distressed after the cupping, continued in a low state for some hours, breathing hard, and, for the most part, with very unpleasant constraint. He expressed himself always greatly comforted by inhaling the warm vapour, and asked for it frequently; but a circumstance occurred which accomplished more for his relief than all other means directed to that object. The incisions made for the cups continued to ooze blood freely after the glasses were taken off. When the vesicatory was applied, the flow of blood was much increased, distilling off so freely as to present the appearance of a small hæmorrhage, staining a great many cloths applied to absorb it, and causing alarm to the patient and nurse. This continued drain from the seat of inflammatory congestion, proved a critical diversion in favour of the patient; I found Morgan next day breathing and swallowing with comparative ease, but extremely debilitated. He continued very feeble for some days, but under light cordial nourishment, and the use of quinine and the mineral acid, directed as soon as seemed safe on decline of the local affection, he recovered steadily and completely.

There is but one remark I would append to this report. I am not sure, the happy result of the case to the contrary notwithstanding, that the omission of *the most certain mean* of averting instant and imminent danger, ought not to be regarded as of questionable justification. I make the above acknowledgment, that none seeing the report of the case, and to whom a similar difficulty might occur for the first time, may be influenced to make an inconsiderate preference, or place undue reliance on a mean which has once succeeded in a case almost desperate. It is seldom safe, on questions of great practical importance, to depart from the concurrent instruction and example of our best authorities.

*Baltimore, May, 1829.*

ART. XIII. *Cases of Cynanche Trachealis.* By SAMUEL JACKSON, M. D. Assistant to the Professor of the Institutes and Practice of Medicine and Clinical Practice in the University of Pennsylvania.

ON the 7th of February, 1829, I was requested to visit, in consultation, E. M. a female child four years of age. She had enjoyed good health, was well nourished, and possessed full embonpoint.

A week previous this child had been attacked, I was informed by Dr. M. who had attended it, with catarrh and inflammation of the tonsils. Emetics and purgatives had been administered; they had operated favourably; and an apparent amendment had ensued. On the 5th the respiration became stridulous and laboured—venesection ad deliquium was practised with the warm bath; which again produced an abatement of the symptoms. On the morning of the 7th, when I first saw the case, the respiration had again become exceedingly laboured, accompanied with the peculiar sound of croup, stridulous, dry, or unattended with any mucous rattle; cough dry. Examination of the throat showed the tonsils enlarged, a small ulcer on each, the posterior fauces red, but no appearance of membranous exudation, as is often seen in cases of croup commencing in cynanche tonsillaris.

The treatment directed was sixty leeches to the throat, and warm bath—with three grains of calomel every half hour—after the leeches, a blister to the throat. No improvement was manifested. In the evening twenty drops of hive syrup every hour added to the former treatment, and calomel reduced to one grain every hour. At the same time muriatic acid was applied to the fauces by means of a brush, as recommended by Bretonneau, in the belief, that, although no exudation was discernible in the fauces, it existed in the larynx, and blocked up the glottis, into which the air was introduced with great difficulty.\*

8th.—Some improvement—mucous secretion is established in fauces and trachea, the respiration is easier and less stridulous. Mucous ronchus or rattle extends throughout both lungs; thorax resonant; pulse frequent; cheeks flushed: blister directed to each side of the thorax—calomel continued, with hive syrup—the secretion of viscid mucus in fauces was copious during the day, and was removed by swabbing—bowels opened several times during the day—discharges dark green—pediluvium at night, with poultices to legs. During the day was more animated and lively.

9th.—Became much worse in the night: in exploring the chest, the

mucous ronchus or rattle, that existed the previous day, had disappeared, and no respiratory murmur was distinguishable, yet the chest was resonant on percussion—respiration exceedingly laboured, and requiring strong muscular exertion—continued to grow worse, and expired suffocated towards noon.

I am indebted to Dr. HORNER for the following account of the post mortem examination.

“*Autopsy, February 9th, twenty-four hours after death.*—Present Dr. Jackson; weather cold, and no visible putrefaction. On opening the thorax, the lungs did not collapse, though there was no unnatural adhesion. Interlobular emphysema existed throughout the lungs, which was manifested by bubbles of air collected on their surface, in clusters, and in strings or chaplets following the division of its lobuli. One of these strings traversed completely the circumference next to the ribs, of the left inferior lobe. There was also a considerable emphysema around the root of both lungs. Throughout the inferior lobe of each lung there was a high sanguineous congestion, such as exists in the acute stage of peripneumony, and which gave a solidity approaching to the sanguineous hepatization. This congestion was of a greater intensity at and about the root of the lungs. The remaining lobes were of a light spongy texture, and, except for their emphysematous state, seemed sufficiently fit to carry on respiration.

The emphysema had passed into the anterior and superior mediastinum behind the sternum, and thence below the fascia profunda cervicis, into the root of the neck, up the trachea to the larynx.

Having taken out all the respiratory organs together, and laid open the trachea and bronchia, there was found a perfect and entire lining of coagulating lymph, extending from the superior margin of the glottis, through the larynx, trachea, and bronchia, into the lungs. This membrane became thicker and thicker in its progress downwards; and could be traced satisfactorily into the secondary branches of the bronchia. It adhered with tenacity to the larynx, and upper half of the trachea; but not so much so as to prevent its being pulled off in a state perfectly distinct. In the lower part of the trachea, and in the bronchia, the membrane was so loose that it separated with the greatest facility, forming perfect tubuli.

The mucous membrane of the larynx, trachea, and bronchia, beneath this lining, was highly injected with blood and inflamed, presenting an appearance, rather rougher than common. In the bronchia it was of a scarlet colour, which increased in intensity the further the bronchia penetrated into the lungs, until the ramifications became so small, as to prevent their being satisfactorily traced. The



augmentation of colour was very abrupt, beyond the terminations of the lining membrane of lymph. The ramifications of the bronchia contained a sero-purulent fluid mixed with air."

This case, in its commencement, according to the statement of Dr. M. who had charge of it in the first instance, exhibited no symptoms of croup or laryngitis; but was regarded by him as a case of cynanche tonsillaris and simple catarrh. When I saw it, for the first time, the characters of croup were well-defined, and had shown themselves during the preceding night. This was the eighth day of the disease. At this time no appearance of exudation was apparent on the fauces.

From the autopsy, it is apparent, that the exudation forming the adventitious membrane, commenced in the bronchial ramifications, and ascended to the trachea; for the membrane was, in this portion, firm, of a certain thickness, perfectly tubular, and had nearly been detached from the mucous membrane. In the superior portion of the trachea and larynx it was of less thickness; was not as readily detached, and was not uniformly spread over the surface. This difference in the state of the membrane is an indication of its earlier formation in the bronchiæ than in the trachea and larynx. This corresponds also with the history of the case, as the symptoms of croup were not manifested until late in the disease.

The emphysematous condition of the lungs was most probably caused by the laboured and difficult efforts of respiration, together with the obstacles opposed by the false membrane of the ærial tubes to the passage of the air. It was this state of the lungs, that rendered the chest resonant on percussion. The operation of bronchotomy, it is obvious, would have been of no utility in this case; the real impediment to the respiratory function existing in the lower portion of the trachea and the bronchiæ.

The counter-irritation of the fauces, by muriatic acid, as proposed by BRETONNEAU, or by nitrate of silver, by M<sup>r</sup>INTOSH, in the view of exciting a new secretion, and thus detaching the membrane from the glottis, could promise no advantage, and proved on trial of no avail.

CASE II. An infant, aged twenty-six months, the younger sister to the subject of the preceding case, of good constitution, and who had enjoyed excellent health, was feverish on the 8th of February, the day previous to her sister's death. On examination, the tonsils were found to be inflamed, with slight ulcers on them, the respiration was

quick and wheezing. It was put into a warm bath; and two grains of calomel given every hour.

9th.—Respiration more difficult, and the croupy sound more decided; feverish. Thirty leeches applied to the throat, sinapisms to legs, and calomel continued. 4, P. M. Respiration easy;  $\zeta$ ij. castor oil. 7, P. M. Improved; bowels freely moved; skin moist; pulse less irritated and frequent.

10th.—Symptoms aggravated during the night; fever increased, and respiration more croupy; very restless. The examination made this morning of the body of the sister having shown the lungs to be extensively affected, forty leeches were applied to the thorax; antim. tart. gr. iv. aqua fluvial,  $\zeta$ ij.;  $\zeta$ ss. administered every half hour. 4, P. M. Symptoms very much abated; emetic had operated freely; croupy sound had very much diminished in ordinary respiration, existed in coughing. 7, P. M. Asleep; pulse feeble; respiration clear and natural in both lungs as determined by the stethoscope. Omit treatment.

11th.—Respiration nearly natural; voice hoarse and imperfect in crying and coughing, no fever; copious secretion of viscid mucus from fauces has commenced. Sago water for nutriment.

12th.—Improving; has appetite; no fever; respiration natural, though the voice continues affected. The voice did not recover perfectly for ten days after the disappearance of the disease.

This case presented the commencement of the same train of symptoms that had conducted the preceding case to a fatal termination. The warm bath, purging, and leeches to the throat, had brought no amelioration to the condition of the patient: the symptoms of croup were unabated. They had failed, in conjunction with emetics and blisters, and the liberal exhibition of calomel, to rescue the sister from the grave. Instructed by the autopsy that had just been made of the body of the sister, the treatment was directed to the prompt reduction of inflammation of the bronchial mucous membrane, and of the lungs. A large number of leeches were applied to the thorax, and to the fossa above the sternum. An immediate amelioration ensued, and the ground, thus won, was maintained by powerful revulsion kept up on the gastric mucous tissue, by the free employment of the tartarized antimony.

In this case we have another instance, in addition to the thousands furnished already by the practice of this country, that the remedies and the treatment of common inflammation are the best adapted to the cure of croup. What utility is there, then, in the designation of

diphtheritic, as employed by Bretonneau: of what service is the assumption of specific inflammations, in the pathology of diseases, when the means for the removal of common inflammation, are the most successful and the most appropriate for their treatment? It does not furnish a single fact available in the management of the disease; it does not present any positive idea as to the condition of organ or structure in which consists the disease; or determine a single principle as a guide to the practitioner. It is the persistence in this system, that continues to foster empiricism; to encourage the idle research, so long fruitlessly pursued, of specific remedies, and which are now preferred in croup; and throws our science into the vague and uncertain condition with which it has long been reproached.

CASE III. M. R. a fine lad, six years of age, had enjoyed generally good health, with the exception of a severe attack of pleurisy and gastric inflammation, when four years old, from which he recovered with difficulty.

*June 5th*, 1827, was seized with fever attended with head-ache; he had been complaining for some days, but without any marked symptoms. Took at bed-time, magnes. calc.  $\mathfrak{z}$ ss., sulph. magnes.  $\mathfrak{z}$ ii.

*6th*.—Bowels opened; continued feverish; complained of sore throat. Evening. Fever augmented. Vs. 8 oz.

*7th*.—Cough, and expectorated a fetid, puruloid matter; epistaxis; fever lessened, and appeared improving.

*8th*.—Became suddenly hoarse, and could only speak in whisper; respiration easy; coughed up viscid phlegm, of nearly membranous consistency; fauces red, no appearance of membrane on them; tonsils enlarged, with slight ulceration. Calomel, gr. viii.; magnes. alb.  $\mathfrak{z}$ i.; poultice to neck; warm bath. Evening. Respiration free; fever subsided; profuse perspiration; bowels had been freely evacuated.

*9th*.—Increase of fever; respiration more embarrassed, with stridulous sound in coughing, but not in breathing; cannot speak above a whisper; ulcers on tonsils extended, and posterior fauces covered with white exudation. Fifty leeches to the throat; solut. of antimon. tartarisat.  $\mathfrak{z}$ ss. every two hours; applied by a pencil to the fauces, solution of nitrate of silver, gr. xii. to  $\mathfrak{z}$ i. water, according to the recommendation of Dr. Mackenzie; pediluvia. Evening. Profuse sweat; respiration attended with a rattle of mucus in trachea, but not stridulous or croupy; fever reduced.

*10th*.—Symptoms aggravated; respiration attended with sound of croup; fauces and tonsils covered with exudation; no fever; skin cool;



pulse natural. Sinapism followed by blister to the throat; calomel, gr. ii. every hour; applied solution of caustic to fauces, increased the strength gr. xxiv. to  $\mathfrak{z}$ i. of water. Solution of antimon. tart. continued; vomited frequently; respiration was apparently relieved for a time; no fever during the day. 9 P. M. Awoke from sleep nearly strangled, produced by a foreign substance engaging in the glottis; was vomited by solution of tartarised antimony, and appeared relieved; respiration natural, excepting when coughing—it then assumes a barking sound.

11th.—During night awoke several times with strangling; respiration at intervals stridulous, and then free; voice more distinct. Continue calomel with addition of ipecac. gr.  $\frac{1}{4}$ , to each powder; fifty leeches to the throat. Leeching was followed with improvement in the respiration and diminution of the cough; pulse soft and natural; no return of fever; posterior fauces clean, exudation has disappeared. Has vomited repeatedly during the day, and discharged a viscid mucus, mixed with firm lymph. Evening. Without fever; skin moist and pulse natural.

12th.—Passed a comfortable night; entire absence of fever; pulse perfectly natural; respiration quite easy; bowels not opened since yesterday. Calomel, gr. i., ipecac. gr.  $\frac{1}{4}$ , every hour; castor oil,  $\mathfrak{z}$ ii. at two o'clock. Fauces remained free of membranous exudation, rather pale colour; cough has harsh sound, and is at times attended with strangling. Evening. Febrile exacerbation; bowels opened twice; breathing less natural, attended with wheezing; complains of difficulty in getting his breath. Sixty leeches around the throat; hive syrup,  $\mathfrak{z}$ i. every hour. Respiration became easier after leeching; was frequently vomited, and discharged tenacious mucus.

13th.—Slept but little during the night; was restless; respiration laboured, harsh; cough constant, severe; sound of a loose body in the trachea. Inhalation of vapour of vinegar; calomel, gr. ii.; ipecac. gr.  $\frac{1}{4}$ , every hour. Cough was incessant from 11 o'clock to 3; the little patient was conscious of some body in the windpipe rising up and falling back; repeatedly attempted to seize it with his fingers; much exhausted. Administered solution of tartarised antimony, and excited vomiting, which procured discharge of some pieces of membrane. This was followed with immediate relief; fell into a sleep that continued until 8 P. M.; awakened by cough, but considerably recruited; respiration harsh, and cough and strangling renewed, though not as incessant as before; more membrane appears to be loosened in the trachea; attempted to dislodge it by provoking sneezing with snuff,

but without effect; produced vomiting, but brought away only tenacious mucus; was easier after it, and fell asleep; bowels opened twice in the day; stools bilious.

14th.—Terrible night; constantly threatened with suffocation, the danger of which became more and more pressing; the glottis appeared to be nearly closed by some mechanical obstruction; auscultation manifested healthy respiratory murmur in both lungs, showing all the difficulty to exist in trachea and larynx. This induced me to propose and urge bronchotomy as affording a chance of safety. At 1, Dr. J. R. BARTON performed the operation of bronchotomy. The patient was then at the last gasp, and had ceased to respire about half a minute before it was completed. The operation was performed with Dr. Barton's usual skill, though the patient was convulsed from suffocation during its performance. On the trachea being opened, a gush of fluid took place from the wound, mixed with blood of a venous hue, and carrying with it some detached pieces of membrane; respiration was renewed through the aperture, and the blood discharged became florid. A mass of loosened membrane was seen in the trachea, part of which was removed by forceps introduced into the trachea, and the remainder was driven into the opening by a violent spasmodic effort of the muscles of respiration, in an attempt apparently to cough. It was immediately seized with the forceps and withdrawn. When unfolded, it exhibited the form of the trachea, its bifurcation, and several ramifications of the bronchia; relief was immediate; respiration natural in frequency and force; some wine and water were administered; in half an hour the colour of the lips became roseate; the animal heat was increased to its natural degree, and muscular strength renovated; respiratory murmur distinct and natural in both lungs; was cheerful, attempted to converse, sat up in bed, and favourable anticipations were indulged. The afternoon was passed in a comfortable state, with occasional sleep; at 8 P. M. pulse was more irritated; skin of febrile heat; respiration laboured; a mucopurulent discharge commenced from the aperture in the trachea; these symptoms continued to advance, the discharge became more viscid, and so abundant, it was difficult to keep the opening free; the respiration was more and more laborious; mucous ronchi were heard in every part of the chest; the sense of distress and suffocation augmented; relieved by coma, and finally death, at 5 A. M. of the 15th, seventeen hours after the operation.

*Autopsy.* Examination thirteen hours after death.—Body thin; limbs slightly rigid; no appearances of putrefaction.

Abdomen. The stomach was distended; contained a quantity of

clear fluid, principally the drinks he had taken previous to death; a thick, white, tenacious mucus, in considerable quantity, adhered to the lining or mucous membrane; in cardiac extremity this membrane was of brown colour; of whitish colour in other portions; thickness and consistency of the membrane no ways altered.

The intestinal tube appeared in natural condition throughout, as it respected colour, consistency, and thickness; secretions natural. Spleen and liver in normal state.

Thorax. Right lung. The pleural surfaces adhered firmly in every part; this condition had resulted from the former severe attack of gastro-pleuritis. The bronchial tubes were filled with a serous frothy fluid which discharged from them when divided. Left lung. No pleural adhesions; collapsed; was crepitating; bronchial tubes contained frothy mucus in small quantities.

Trachea and larynx. The interior of the larynx was completely incruusted over, with membraniform exudation; it lined the internal face of the epiglottis; the external was free of it; the rima glottidis was nearly closed by it. The ventricles of Morgagni, the ligaments, &c. were no longer apparent from the thickness of the membranous layer, spread over the interior of the larynx. This layer adhered firmly to the mucous membrane, but its surface was irregular, appearing as though pieces had been detached.

The membraniform exudation extended through the trachea, and penetrated the bronchia, below its ramification, but did not enter the smaller divisions. At the ramification, the calibre of the bronchial tube was so much diminished as merely to admit a small quill. In the trachea, the exudation was closely adherent to the mucous membrane; in the bronchia it was detached and tapered off to a point. It could be separated, in the thickest portions, into layers, appearing to have been formed by successive exudations.

The lower portion of the trachea and the bronchia contained a fluid of the consistency and possessing the colour of cream; the tonsils and posterior fauces were covered with a copious, thick, viscid mucus, strongly resembling albumen. The fluid of the trachea, I suspect came from this source, and the alteration of its colour, proceeded from its mixture with the air. I observed before death, that every act of inspiration produced a singular rattling sound. The copious secretion from the fauces, could not be expectorated, in consequence of the opening into the trachea, which destroyed the phenomenon of coughing, and it was drawn into the trachea by the effort of inspiration. Hence the windpipe was filled with it, respiration embarrassed, and suffocation ensued from its accumulation in the trachea



and bronchia, with that of the bronchial secretions, in the lungs, from the impossibility of expectorating them, by the loss of the power of coughing.

The preceding cases justify the following conclusions:—

1st. That inflammation of the tonsils is a frequent precursor to croup in children; and that it ought consequently always, in them, be attentively watched, and should be treated very actively by the means best adapted to reduce inflammation.

2d. That the membranous exudation may commence in the lower part of the trachea and the bronchia, extending upwards, and does not invariably arise in the fauces or larynx, and proceed downwards.

3d. That the most prompt and decisive remedy for sanguine inflammation—that is, sanguineous depletion—is the only certain remedy, and should be resorted to in the first periods of the disease, so as to precede the membranous exudation.

4th. That the membranous exudation having been once produced to any extent, little expectation of a recovery is to be entertained. When this result does occur, it is to be regarded as fortuitous, depending on some extraordinary circumstance, and which cannot be calculated as a probable event.

5th. That when the membranous exudation has been thrown out in the larynx, trachea, and bronchia, the application of muriatic acid to the fauces, so highly extolled by Bretonneau, and of nitrate of silver, recommended by Dr. Mackenzie, from the local and limited impression they must necessarily make, can promise no beneficial operation—their influence cannot be extended to the surfaces from which the exudation takes place. This practice can be of utility only in rare cases, where the difficulty arises from an obstruction limited to the glottis and fauces.

6th. That laryngotomy, or bronchotomy, is a useless operation, when the membranous exudation has actually occurred, and extends, as it mostly does, to the trachea and bronchia; or, when the inflammatory irritation of the respiratory mucous membrane is not subdued, and a free secretion from it is produced. The impossibility of coughing after the operation, prevents expectoration, the fluids accumulate in the trachea, bronchia, and bronchial ramifications in the lung, causing, finally, suffocation. The only case in which the operation promises success, is an obstruction confined entirely to the glottis, without disease prevailing to any extent in the respiratory mucous membrane.

ART. XIV. *Meteorological Observations made in the City of Philadelphia, latitude 39° 57', and on the Island of Tinicum, eleven miles south-west from Philadelphia, latitude 39° 48' for the year 1826.\** By GEORGE F. LEHMAN, M. D. Lazaretto Physician of the Port of Philadelphia.

## JANUARY, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	39	44	41	S. W.	Cloudy. Rain.
2	28	31	30	S. W.	Overcast.
3	30	31	35	S. W.	Clear.
4	35	39	37	S. W., W.	Clear.
5	20	26	25	S. W., N. W.	Clear.
6	22	27	30	S. W., N. W.	Clear.
7	34	35	38	S. W.	Cloudy. Light rain.
8	43	45	47	S. W.	Cloudy. } Foggy weather.
9	43	49	50	S. W.	Cloudy. }
10	49	52	54	S. W.	Clear.
11	40	44	44	S. W.	Clear.
12	39	42	44	S. W., S.	Overcast.
13	35	39	43	W., S. W.	Clear.
14	44	48	52	S., N. E.	Flying clouds.
15	51	53	44	S. W.	Cloudy.
16	32	32	31	S. W., S. by N.	Clear.
17	29	31	33	N. W.	Clear.
18	30	33	35	N. W.	Clear.
19	30	36	37	S. W., W.	Overcast.
20	30	30	32	N. W., N. E.	Clear.
21	29	33	34	N. E.	Clear.
22	29	31	36	N. W., S. W.	Clear.
23	36	40	42	S. W., S.	Clear.
24	36	37	35	E., W.	Cloudy. Snow
25	16	17	16	N. W.	Clear.
26	16	19	22	N. W.	Clear.
27	22	32	38	S.	Overcast.
28	36	36	37	S., N. W.	Cloudy.
29	34	40	39	S., N. E.	Clear.
30	25	28	28	N. E.	Cloudy. Snow.
31	12	14	15	N. E.	Cloudy. Snow.

\* The observations were made in the city, for the months of December, January, February, March, April, and May; and on the Island, for June, July, August, September, October, and November. The vane upon which I relied during the winter months having proved untrue, I am indebted for the correction of the winds, &c. to the record of the Pennsylvania Hospital, and Health-office, kept by Mr. Thomas Smith and Joseph Pryor.

Total rain during the month	-	-	-	-	1.23 inches.
Mean temperature	-	-	-	-	34.60° Fahr.
Maximum	-	-	-	-	54°
Minimum	-	-	-	-	12°
Range of Thermometer	-	-	-	-	42°

Hottest day, 10th.—Coldest day, 31st.

*Comparison with January, 1825.*

Mean temperature	-	-	-	-	0.42° less this year.
Maximum	-	-	-	-	7° greater.
Minimum	-	-	-	-	8° less.

*January 3d.*—There was a heavy fall of snow at Quebec, and on the 5th, the thermometer fell to 8° below zero.

*Hallowell, Maine, January 4th.*—The rain, which fell with little intermission during Friday and Saturday last, produced a freshet which has cleaned out the ice from the river, and inundated the wharves. A winter freshet, sufficient to break up the ice, has not occurred in the Kennebeck before for eighteen years.

*New Jersey, January 10th.*—The weather since the commencement of winter has been very changeable. Last week large masses of ice were floating in the river, now there is scarcely any.

*Quebec, January 11th.*—The present winter has been remarkable for sudden and great variations of temperature; a few very cold days, the thermometer down to between 10° to 20° below the zero of Fahrenheit, and then rising to between 10° to 20° above freezing. The last cold was on the 5th instant, when the thermometer was down to 10° below zero. On the 9th, during the night and next morning, it rained heavily, wind at north-east.

*Albany, N. Y. January 12th.*—The river in the neighbourhood of this city is entirely free of ice. The rise of water has been great.

*Mount Carbon, Penn. January 13th.*—For more than a week past, the weather has been singularly warm and mild, with occasional showers.

*Norfolk, Virginia, January 16th.*—On the night of the 14th, about 10 o'clock, a violent tornado suddenly arose this side of Suffolk, extending about half a mile, which did considerable damage to property. Its duration was about fifteen minutes. Large white oak trees of the diameter of two feet were uprooted.

*Raleigh, North Carolina, January 17th.*—The weather last week was mild as spring. On the night of the 14th we had a violent storm of rain and wind, accompanied with thunder and lightning. On the 15th, there was a sprinkling of snow, and yesterday morning the thermometer was down to 38°.

*Quebec, January 19th.*—The health of this city since the beginning of last autumn has been worse than for many years past. The chief character of the diseases was inflammatory, probably owing to the great heat of the summer, and the extraordinary mildness of the weather to this period.

*Providence, Rhode Island, January 27th.*—During the late warm weather, multitudes of grasshoppers were seen in Warwick, ten miles distant from Providence.

*Philadelphia, January 30th.*—It commenced snowing between 8 and 9 o'clock A. M. and continued until 4 P. M. The average depth was between three and four inches.

The influenza prevails pretty generally in Pennsylvania, and in the adjoining states.



## FEBRUARY, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	11	13	18	N. W., N. E.	Clear. Cloudy.
2	27	33	34	N. E., S.	Cloudy. Snow.
3	35	37	37	S. W., N.	Clear.
4	29	33	35	N. W.	Clear.
5	35	35	40	N. W., W.	Overcast.
6	31	39	41	W.	Clear.
7	35	38	39	S. W.	Cloudy. Rain.
8	39	41	42	W., S. W.	Clear.
9	31	35	36	N. W., N.	Clear.
10	36	38	42	S. W.	Cloudy. Light rain.
11	40	43	46	S. W.	Cloudy. Rain.
12	35	45	46	S. W., W.	Cloudy. Clear.
13	40	40	41	N. W., N.	Clear.
14	39	42	45	E.	Cloudy.
15	28	29	31	N. W.	Clear.
16	31	34	37	N. W.	Clear.
17	36	35	36	N. W.	Clear. Overcast.
18	29	30	31	N. W.	Clear.
19	32	36	36	N. W., W.	Overcast.
20	33	35	35	N. E.	Cloudy. Rain.
21	36	36	39	N. E.	Cloudy. Rain.
22	36	38	38	N. W.	Cloudy.
23	31	39	43	N. W.	Clear.
24	44	49	54	S., W.	Cloudy.
25	52	63	63	S., S. W.	Clear.
26	50	55	56	S. W.	Clear.
27	40	42	41	N. E.	Cloudy. Rain.
28	37	37	38	N. E.	Cloudy. Rain.

Total rain during the month - - - - 2.41 inches.

Mean temperature - - - - 37.60° Fahr.

Increase of heat from last month - - - 3°

Maximum - - - - 63°

Minimum - - - - 11°

Range of Thermometer - - - - 52°

Hottest day, 25th.—Coldest day, 1st.

*Comparison with February, 1825.*

Mean temperature - - - - 1.61° greater this year.

Maximum - - - - 9° greater.

Minimum - - - - 6° less.

*Albany, N. Y. February 1st.*—The earth is now covered three inches deep with snow, and the weather is extremely cold.

*Philadelphia, February 2d.*—At daylight the thermometer was 4° above zero.

*Boston, Mass. February 2d.*—The weather continued severely cold yesterday.

In the morning the thermometer was as low as  $14^{\circ}$  below zero. The harbour is now completely frozen.

*Philadelphia, February 4th.*—Before sunset a large flight of wild pigeons passed over the city, steering their course to the Jersey cedars. This migration is at least a month earlier than usual.

*Philadelphia, February 8th.*—The Delaware river, which closed for the first time this season on the night of the 31st of January, again opened and became navigable this morning.

*New York, February 21st.*—The weather continues changeable. Yesterday morning between 2 and 3 o'clock with mild and calm weather, snow began to fall, and continued until after 12 meridian—the greatest fall of snow during the season. The afternoon was mild without sunshine, and a drizzling rain set in about dark.

*Fort Niagara, February 22d.*—The winter has been stormy and unpleasant, the weather cold and changeable. Yesterday the thermometer stood at  $50^{\circ}$  above zero, and to day it is  $20^{\circ}$ . It has been as low as  $4^{\circ}$  below zero.

*Mifflintown, Penn. February 25th.*—For the last ten days we have had every indication of approaching spring. The ground is almost free from frost, and the late rains have raised our river.

*Harrisburg, Penn. February 27th.*—The weather of last week was remarkably mild. The Susquehanna is clear of ice. Flights of pigeons have been observed for several days, and the wild geese are on their way to the lakes.

*York, Penn. February 28th.*—A very large flock of crows flew over our town on the 24th instant, to the north.

In the southern states, the influenza prevails most extensively and severely.

## MARCH, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	37	38	38	N. E.	Cloudy. Rain.
2	40	39	42	N. E.	Cloudy. Rain.
3	43	45	48	N. E.	Cloudy. Rain.
4	44	49	51	S. W., N. W.	Cloudy. Rain.
5	49	51	54	N. E.	Cloudy. Rain.
6	50	52	53	N. E.	Cloudy. Rain.
7	39	41	43	N. E.	Cloudy.
8	40	40	43	N. E.	Cloudy. Rain.
9	46	49	51	S.	Clear.
10	62	65	69	S. W.	Cloudy. Rain.
11	49	50	53	N. W.	Clear.
12	36	48	50	S. E.	Overcast.
13	46	50	54	N. W.	Clear.
14	38	41	44	N. E., S. W.	Clear.
15	39	46	49	S. W.	Cloudy. Showers.
16	49	52	51	S. W., N. W.	Clear. Wind very fresh.
17	31	34	38	N. W., N.	Clear.
18	34	36	36	N. E.	Cloudy. Rain and Snow.
19	37	38	38	N. E.	Cloudy. Rain and Snow.
20	39	40	41	N. E., S. W.	Cloudy. Rain, with thunder and lightning.
21	37	40	41	N. W.	Clear.
22	39	42	47	N. W., S. W.	Clear.
23	41	54	61	N. E., N. W.	Overcast.
24	64	68	69	S. W.	Cloudy. Rain. Thunder and Lightning.
25	45	44	43	N. W.	Clear.
26	37	38	39	N. W.	Clear.
27	35	36	39	N. W., W.	Clear.
28	39	44	49	S. W.	Cloudy. Showers.
29	45	48	50	S., N. W.	Overcast.
30	40	44	45	N. W.	Clear.
31	35	44	47	N. W.	Clear.

Total rain during the month - - - - 3.65 inches.

Mean temperature - - - - 45.02° Fahr.

Increase of heat from last month - - - 7.42°

Maximum - - - - 69°

Minimum - - - - 31°

Range of thermometer - - - - 38°

Hottest day 24th.—Coldest day 17th.

*Comparison with March, 1825.*

Mean temperature - - - - 2.78° less this year.

Maximum - - - - 3° greater.

Minimum - - - - 5° less.

*Fayetteville, N. C. March 1st.*—For several days past, the weather has been so uncommonly warm that vegetation has progressed to a surprising degree. Many peach trees are in full bloom.



*Columbus, Ohio, March 2d.*—The greatest fall of snow this winter, was on Sunday evening and Monday last.

*St. Louis, Missouri, March 2d.*—On Monday last a greater fall of snow occurred than we have witnessed for at least five years. Our winter has been uncommonly long and dry, and more uniformly cold than usual.

*Mount Carbon, Penn. March 3d.*—We have had during the week, several very fine spring days, and a considerable quantity of warm rain.

*Greensburg, Penn. March 3d.*—For the last three or four days it has rained almost uninterruptedly.

*Wiscasset, Maine, March 3d.*—On Sunday last, about a mile from this village, large numbers of grasshoppers were discovered jumping and moving about with as much vigour as in the summer season.

*Salem, Mass. March 4th.*—For several days the weather has been warm and pleasant, the thermometer ranging from 35° to 53°.

*Goshen, N. Y. March 5th.*—The effects of the late storm among the fruit, ornamental and forest trees, have been disastrous in the extreme. Never before was such a body of ice known to cleave to them, or to continue on them for so long a time; the comparative weight of ice and wood as ascertained by experiment, was about thirty pounds of ice to one of wood, on small twigs.

*Richmond, Va. March 6th.*—There is every indication of spring. On the morning of the 4th, there was a long and continual succession of thunder and lightning. The heat was very oppressive. On the 5th, at two o'clock, the thermometer stood in the shade at 75° on Shockæ-hill, this day at 84°. Shad are already in market. The garden violet is in flower, and the apricot is in bloom.

*Alexandria, D. C. March 5th.*—The weather is oppressively warm. Immense flocks of wild pigeons are now visiting this part of the country.

*Cincinnati, Ohio, March 7th.*—Incessant rains have fallen for several days, and the river is very high, and still rising.

*Cleraw, S. C. March 3d.*—The thermometer is ranging from 75° to 81°. Peach trees have been in bloom for some days, and corn and peas are in considerable progress. Our river is unusually high, and the banks are overflowed.

*Petersburgh, Va. March 4th.*—The thermometer in a cool situation is at 85°. Already the early fruit trees, such as the peach, apricot, &c. are in full blossom.

*Pittsburgh, Penn. March 8th.*—There has been a fine rise of waters, occasioned by heavy rains.

*Harrisburg, Penn. March 9th.*—Thousands of swans and wild geese now cover the Susquehanna, in the vicinity of this place, which is very unusual, and can only be accounted for from the fact that ten days ago the Alleghany Mountains, south of us, were covered with snow. The Susquehanna is higher than it has been for some seasons past.

*Charleston, S. C. March 13th.*—After three weeks of unusually warm and dry weather, we had a copious shower of rain on the 11th, attended by thunder and lightning.

*Middletown, Penn. March 24th.*—About one o'clock we were visited by a severe storm, with heavy rain, which lasted with unabated violence for two hours.

*Montgomery, Al. March 24th.*—Our spring has been remarkably mild and pleasant until within a few days. On the night of the 20th, a severe frost injured cotton that had made its appearance above ground. The weather is again warm.

APRIL, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	45	59	54	N. W.	Clear.
2	45	52	53	N. W., N. E.	Clear. Overcast.
3	44	48	48	N. E.	Cloudy.
4	48	55	54	S. W.	Clear.
5	47	51	51	S. W.	Clear. Hyacinth in full bloom.
6	40	40	40	N. E.	Cloudy. Rain. Thunder and lightning.
7	41	44	44	N. E. very fresh.	Cloudy. Rain.
8	41	45	47	N. W., S. W.	Clear. Ice early in the morning.
9	48	52	54	S. W.	Cloudy. Rain.
10	36	36	37	S. W.	Cloudy. Rain. Snow.
11	31	35	33	N. W.	Cloudy. Wind high. Snow at night.
12	32	35	37	N. W.	Clear.
13	39	45	46	S., S. W.	Clear. Cloudy. Frost A. M.
14	46	49	50	S. E., S. W.	Cloudy. Showery.
15	51	55	60	S. W., N. E.	Clear. Wind fresh.
16	56	63	61	S. W., S. E.	Cloudy. Showers.
17	51	62	62	N. W.	Clear.
18	61	73	75	S. W., N. W.	Cloudy. Showers.
19	59	65	65	S. W., N. W.	Clear.
20	56	60	60	N. W., W.	Cloudy.
21	46	52	51	N. W.	Clear. Wind very high.
22	44	49	48	N. W.	Cloudy.
23	43	52	56	S. W., N. W.	Clear.
24	45	54	59	W.	Cloudy. Shower. Lightning.
25	50	57	59	N. E.	Cloudy. Rain.
26	47	50	54	N. E.	Cloudy. Rain.
27	49	49	48	N. E.	Cloudy. Rain.
28	51	54	58	N. E.	Cloudy.
29	54	60	68	S. W.	Cloudy. Shower, and thunder and lightning.
30	50	59	64	N. W.	Clear.

Total rain during the month - - - - - 2.79 inches.

Mean temperature - - - - - 50.52° Fahr.

Increase of heat from last month - - - - - 5.50°

Maximum - - - - - 57°

Minimum - - - - - 31°

Range of thermometer - - - - - 44°

Hottest day, 18th.—Coldest day, 11th.

*Comparison with April, 1825.*

Mean temperature - - - - - 5.59° less this year.

Maximum - - - - - 4° greater.

Minimum - - - - - 3° less.

*New York, April 1st.*—The wind has blown with violence for nearly forty-eight hours from the north-west.

*New Haven, Connecticut, April 4th.*—A meteor passed over this city at half past seven o'clock on Friday evening, in a westerly direction; soon after which an explosion was heard.

*Hamilton, Ohio, April 5th.*—During a severe thunder storm a flash of lightning struck the chimney of the dwelling of James Bual, and caused the death of his wife, two children, and mother-in-law.

*Newport, Rhode Island, April 8th.*—On the 20th of March, about half past seven P. M., a bright and beautiful meteor passed in full view of the inhabitants of this town. Its diameter was apparently about one quarter that of the full moon, and the light emitted from it much more brilliant. Its course was from east to west.

*Lexington, Kentucky, April 10th.*—Every thing is covered with snow. It continued to snow nearly the whole day, the wind at west, and very cold. On the eleventh, the thermometer stood at sunrise  $10^{\circ}$  below freezing. The fruit, which was generally in blossom, or had cast the bloom, is entirely killed.

*Cincinnati, Ohio, April 11th.*—For two days past most extraordinary weather has prevailed here. On the morning of the 9th it commenced raining, and continued till about 5 P. M., when it set in to snow, and during the night more snow fell than we have had at any time the past winter. On the 10th it was cold and blustering, and more snow fell. The snow was two inches deep, and the fruit trees in full bloom.

*Mount Carbon, Penn. April 14th.*—Rain, snow, and frost alternately, have prevailed during the whole of the spring.

*Montreal, Canada, April 14th.*—About 11 o'clock at night a meteor was discovered directly over this city, which for a moment shed a most brilliant light. The size appeared to be many degrees larger than the moon when at full, and was visible about two or three seconds.

*Charleston, S. C. April 27th.*—The weather has been excessively warm for a few days, and on the 26th a violent squall commenced, which continued with great violence for an hour, attended with thunder and lightning.

*Chillicothe, Ohio, April 29th.*—A tremendous storm of wind and rain occurred, which exceeded in violence any with which we have been visited for many years, and did considerable damage to garden and fruit trees, fences and houses.

*Kingston, Jamaica, April 30th.*—Two slight shocks of an earthquake were felt.



MAY, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	56	65	65	S. E., E.	Cloudy.
2	66	75	76	S. E., S. W.	Clear.
3	74	78	79	S. by E.	Cloudy.
4	70	78	76	S. W.	Hazy. Clear.
5	69	73	72	N. W., S. W.	Cloudy.
6	60	63	64	N. W., W.	Clear.
7	61	70	76	S. W.	Cloudy.
8	63	69	68	N. W., N.	Clear.
9	58	59	60	S. E.	Cloudy. Rain.
10	57	59	61	S. E.	Clear. Cloudy. Rain.
11	63	66	69	N. W., S. W.	Clear.
12	64	71	73	N. W., W.	Clear.
13	66	73	76	S. W.	Clear.
14	70	82	86	S. W.	Cloudy. Clear.
15	78	85	84	N., S. W.	Clear.
16	79	86	83	S. W., W.	Hazy.
17	79	85	86	S. W., W.	Clear.
18	71	78	78	N., N. W.	Clear.
19	69	74	74	N. W., N.	Hazy.
20	68	72	76	S. E., S. W.	Hazy. Clear.
21	72	75	79	S. W.	Cloudy. Shower.
22	73	80	79	N. W.	Cloudy. Thunder.
23	77	81	82	S. W.	Clear. Cloudy.
24	79	86	84	N. E.	Clear. Cloudy.
25	73	78	78	N. E.	Clear.
26	68	73	76	N. E., N. W.	Cloudy. Hazy.
27	73	81	81	N. W.	Clear.
28	79	80	83	N. W.	Cloudy.
29	69	73	73	N. W.	Clear.
30	64	69	69	N., N. W.	Clear.
31	70	74	75	N. W., W.	Clear.

Total rain during the month - - - - - 0.18 inches.

Mean temperature - - - - - 74.56° Fahr.

Increase of heat from last month - - - - - 24.4°

Maximum - - - - - 86°

Minimum - - - - - 56°

Range of the thermometer - - - - - 30°

Hottest day, 17th.—Coldest days, 9th and 10th.

*Comparison with May, 1825.*

Mean temperature - - - - - 8.65° greater this year.

Maximum - - - - - 5° greater.

Minimum - - - - - 7° greater.

Quebec, May 1st.—The weather continues chill and ungenial; a good deal of snow still remains.

*Richmond, Vir. May 11th.*—About midday a complete circle was visible around the sun, which continued near an hour and a half.

*St. Louis, Missouri, May 12th.*—The waters of the Mississippi are supposed to be as high as at the great fresh of 1811.

*Charlottesville, Vir. May 13th.*—Immense swarms of locusts are making their appearance among us.

*New Orleans, May 13th.*—The weather for the last week has been extremely warm. The Mississippi last season did not obtain by three inches the height it is now at.

*Montreal, Canada, May 17th.*—The weather has been oppressively warm. On the 15th and 16th the thermometer was  $88^{\circ}$  in the shade.

*Kennebunk, Maine, May 17th.*—About half past three o'clock a severe tornado visited this part of the country. For two or three days previous the weather had been uncommonly warm, the thermometer ranging from  $90$  to  $100^{\circ}$ .

*Morristown, New Jersey, May 18th.*—The thermometer has ranged between  $88$  and  $92^{\circ}$  in the shade since the 14th, and no rain has fallen for a fortnight.

*Petersburg, Vir. May 19th.*—No rain has fallen here since the 3d instant, and vegetation is suffering. Immense swarms of locusts have appeared. The thermometer has ranged for the last few days from  $85$  to  $90^{\circ}$ .

*Georgetown, S. C. May 19th.*—The Pee Dee river is very low, the weather warm, and the earth parched.

*West Chester, Penn. May 23d.*—The last three weeks have been extremely dry, and sometimes oppressively warm.

*Newark, New Jersey, May 23d.*—No rain has fallen for three weeks, and the weather is extremely hot.

*Norristown, Penn. May 24th.*—During several days last week the atmosphere was so dense and smoky as to obstruct the influence of the sun. The great drought has been succeeded by copious showers.

*Norfolk, Vir. May 24th.*—Much rain usually falls in the months of April and May. From the 3d to the 22d of the present month not a drop has fallen in this section of the country.

*Savannah, Georgia, May 25th.*—A season of more excessive drought than the present comes not within our recollection.

*Quebec, May 25th.*—The weather continues warm, and remarkably dry.

*New York, May 27th.*—The weather continues hazy, and the winds every twenty-four hours blow lightly from all points of the compass. We have had no rain for nearly a month.

*Norfolk, Vir. May 28th.*—In the afternoon and evening we had copious showers of rain, with continual thunder and lightning. The drought had prevailed for four weeks.

A long and extraordinary drought prevails in North Carolina.

*Kent County, Delaware, May 30th.*—Vegetation is nearly all destroyed. We have had no rain to wet the ground for a month past.

*Richmond, Vir. May 30th.*—Several thunder storms of unusual violence have lately passed over this city.

*New Brunswick, New Jersey, May 31st.*—The long-continued dry weather, and extreme heat, has nearly dried up our pasture fields and meadows, and the fields of wheat and rye assume a sickly aspect. Immense swarms of locusts are destroying our little vegetation.

JUNE, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1					
2	76	82	87	S. W.	Clear. Air electric at night.
3	82	86	86	S. W.	Clear. Shower at night with thunder and lightning.
4	80	84	82	S. W.	Clear. Cloudy. Rain P. M. Thunder and lightning.
5	78	75	74	N. E. fresh.	Cloudy. Sprinkle of rain.
6	59	64	66	N. E.	Cloudy.
7	66	71	74	S. W.	Cloudy.
8	76	80	82	S. W., N. W.	Clear.
9	80	83	86	E., S.	Clear.
10	76	81	84	N. E., S. W.	Clear.
11	80	86	87	S. W., N. W.	Clear. Twelve at night a gale from N. W.
12	69	73	76	N., N. W.	Clear.
13	71	74	76	N. E.	Clear.
14	70	74	75	N. E., S. E.	Clear.
15	71	78	81	S. W.	Clear. Thermom. 60° at sunrise.
16	73	76	72	N. E.	Cloudy. Sprinkle of rain.
17	70	70	71	N. E., E.	Cloudy. Sprinkle of rain.
18	69	70	70	E.	Cloudy. Moderate rain all day. Hard rain at night.
19	72	74	75	S. E., N. E.	Cloudy. Fine rain.
20	71	72	74	N. E.	Cloudy. Sprinkle of rain. Clear.
21	66	69	69	N. E.	Cloudy. Drizzle of rain at night.
22	62	64	64	N. E.	Cloudy. Drizzly.
23	63	65	68	N. E.	Cloudy. Sprinkle of rain.
24	66	71	74	N. E., S. W.	Cloudy. Clear. Shower at night with thunder and lightning.
25	73	78	80	S. E., S. W.	Cloudy. Hard showers with thunder and lightning.
26	72	78	80	S. E., S. W.	Cloudy. Clear. A gale A. M. from S. E. with rain.
27	72	74	74	N. W.	Clear. Cloudy. A shower of rain.
28	72	75	78	S. W. fresh.	Clear.
29	78	80	82	S. W. fresh.	Clear. Cloudy. Very heavy rain at sunset, wind fresh, with thunder and lightning.
30	76	76	78	W.	Hazy.

Total rain during the month - - - - 4.96 inches.

Mean temperature - - - - 72.17° Fahr.

Decrease of heat from last month - - - - 2.39°

Maximum - - - - 87°

Minimum - - - - 59°

Range of thermometer - - - - 28°

Hottest day, 11th.—Coldest day, 6th.

*Comparison with June, 1825.*

Mean temperature - - - - 4.32° less this year.

Maximum - - - - 1° less.

Minimum - - - - the same.



*Charleston, S. C. June 1st.*—Fine large and ripe peaches may now be seen in this city.

*St. Louis, Missouri, June 1st.*—The late freshet has been very destructive. At the Mandan villages the water rose seventeen feet perpendicularly in a few hours, and at the Arrickara towns fifteen feet in two hours. The rise was owing to the melting of the snow and ice at the heads of the Yellow-stone and Chayenne rivers.

*New York, June 2d.*—We experienced a succession of thunder showers this afternoon and evening. *June 3d.*—The rain has not cooled the atmosphere. At one o'clock the mercury in Fahrenheit stood at  $86^{\circ}$ .

*Elizabethtown, N. J. June 2d.*—After a severe drought, this afternoon we had copious showers, with much thunder and lightning.

*Richmond, Va. June.*—On the 2d, 3d, 4th, and 5th, the thermometer ranged in different situations from  $89^{\circ}$  to  $92^{\circ}$ . On the 6th and 7th the temperature was quite agreeable.

*Baltimore, June 3d.*—At 5 A. M. the thermometer stood at  $85^{\circ}$ , and at 1 P. M. at  $92\frac{1}{2}^{\circ}$ . The drought still continues.

*Albany, N. Y. June 4th.*—This afternoon we were visited by a storm of rain, accompanied with severe thunder and lightning. The wind blew a tornado from the N. W. and there was some hail mingled with the rain.

*New York, June 5th.*—At 11 o'clock at night an exhalation of uncommon splendor passed over this city, in a line from south to north. The night was cool, the thermometer having fallen from  $87^{\circ}$  to  $71^{\circ}$  the day preceding, the wind northerly, and no signs of heat or lightning in the atmosphere. Nearly a minute afterward a flash in the N. W. illuminated the clouds beneath, and was followed by a report.

*Norfolk, Va. June 5th.*—After suffering for several days under excessive heat and drought, this afternoon we had plentiful showers, with terrific thunder and lightning.

*Greensburg, Penn. June 9th.*—An immense quantity of rain has lately fallen in this neighbourhood, and the crops of grain are much invigorated.

*Harrisburg, Penn. June 12th.*—Copious and refreshing rains have fallen for a week past.

*Egg Harbour, N. J. June 13th.*—A tremendous hail storm occurred which did considerable damage.

*New York, June 19th.*—This day 3.75 inches of rain fell. From the night of the 19th to the 22d, two inches, and from the 22d to the 23d, 1.25 inches, in all 7 inches in five days.

*Montreal, Canada, June 21st.*—As yet there has not been a single clap of thunder, and rain has become an object of extreme rarity. In Upper Canada a similar, but not equal drought, has been experienced.

*Baltimore, June 25th and 26th.*—The heavy rains have swelled the streams within the vicinity of this city to an unusual height.

*New York, June 26th.*—The storm which has continued for seven days is not yet over. Heavy showers have fallen this forenoon, accompanied by a gale from the south, blowing at times with the force of a hurricane.

*York, Penn. June 27th.*—Rainy weather prevailed all last week, and the ground has become completely saturated.

*Albany, N. Y. June 27th.*—About half past 1 o'clock P. M. this city and vicinity was visited by a severe hail storm. Several smart showers of rain occurred in the afternoon, accompanied with thunder.

JULY, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	74	78	79	W., S. W.	Clear. Hazy. Shower at sunset.
2	74	78	79	S. W., N. W.	Clear.
3	74	77	80	S. W.	Hazy. Clear.
4	73	78	79	S. W.	Overcast. Clear.
5	73	75	74	N. E.	Cloudy. Rain. Hard rain at night.
6	71	75	78	N. W.	Clear.
7	75	81	82	N. W.	Clear.
8	78	83	85	S. W.	Clear.
9	78	80	83	N. E.	Clear.
10	75	78	82	S. W.	Clear.
11	76	80	84	S. W.	Clear.
12	78	81	86	S. W.	Clear.
13	79	82	85	S. W., N. W.	Clear. Cloudy. Hard showers.
14	74	74	74	N. W.	Cloudy.
15	71	74	74	N. W.	Clear.
16	74	77	81	S., S. W.	Cloudy. Clear.
17	77	80	83	S. W.	Clear. Shower at sunrise.
18	76	77	78	N. W.	Clear.
19	74	76	78	N. W.	Clear.
20	75	77	78	S. W.	Clear.
21	75	79	81	S. W.	Clear.
22	80	82	85	N. W.	Clear.
23	79	82	83	N. W.	Clear.
24	72	76	77	N. W.	Clear. Cloudy.
25	69	72	74	N. W. fresh.	Clear.
26	68	72	73	N. W. fresh.	Clear.
27	67	70	73	N. W. fresh.	Clear.
28	70	74	76	N. W., N. E.	Clear.
29	70	75	78	N. E., S. E.	Clear.
30	71	75	78	N. E., S. E.	Clear.
31	71	74	78	E., S. W. variable	Clear.

Total rain during the month - - - - 4.75 inches.

Mean temperature - - - - 86.43° Fahr.

Increase of heat from last month - - - 14.26°

Maximum - - - - 86°

Minimum - - - - 67°

Range of thermometer - - - - 19°

Hottest day, 13th.—Coldest day, 27th.

*Comparison with July, 1825.*

Mean temperature - - - - 6.06° greater this year.

Maximum - - - - 5° less.

Minimum - - - - 3° less.

*Pennsylvania, July 1st.*—Considerable damage has been done by the swelling of the waters in the interior of the state.

*Boston, Mass. July 2d.*—The city and neighbourhood were visited with a severe thunder shower, which lasted more than half an hour. The lightning was vivid, and some of the peals of thunder tremendous.

*Portsmouth, Ohio, July 6th.*—The Ohio river has been rising gradually for the last six weeks, to the extent of thirty perpendicular feet. A great deal of rain has fallen.

*Wilkesbarre, Penn. July 7th.*—On the afternoon of the 2d, a destructive hail storm visited Pittston township, in this county. The grain crops were beaten to the ground, and fruit trees stripped of their leaves and small twigs. The houses on the north-east side are left without a pane of glass. The hail-stones were about as large as musket balls.

*Charleston, S. C. July 8th.*—About twenty minutes before eleven o'clock at night, a brilliant meteor of the size of the full moon appeared in a south-west direction. Its height was  $45^{\circ}$  above the horizon, and it moved in a direct line north. It was at least fifteen seconds in its course, and the train of light it left behind was as bright and vivid as the meteor itself.

*Mobile, Alabama, July 11th.*—For two weeks the weather has been very hot and dry, with a prevalence of north winds, which experience has shown to be particularly unfriendly to the health of the city.

*Quebec, July 14th.*—On the 11th, 12th, and 13th, a good thermometer continued for hours before and after midday at  $94^{\circ}$ ,  $95^{\circ}$ , and  $96^{\circ}$  of Fahrenheit in the shade. Exposed to the sun, the thermometer rose to  $140^{\circ}$ .

*Salem, Mass. July 15th.*—During the last four days the weather has been excessively hot. On the 11th, at noon, Fahrenheit's thermometer was at  $98^{\circ}$ , and on the 12th and 13th, at  $96^{\circ}$ . On the 14th a fine rain fell, and the weather changed. At eight o'clock A. M. to day, the thermometer stood at  $69^{\circ}$ , and at three o'clock at  $73^{\circ}$ .

*Fayetteville, N. C. July 19th.*—There never was known in this section of the country, a summer season so dry as the present. The streams have been so dry that people in some of the neighbouring counties were obliged to go forty, fifty, and even sixty miles to get their corn ground.

*Richmond, Virginia, July 21st.*—For several days past we have not been favoured with a shower of rain. The drought is severely felt in various directions.

*Harrisburg, Penn. July 24th.*—The weather was distressingly warm last week, and notwithstanding the thunder gusts that have been passing around us, it continues sultry.

*Wickford, Rhode Island,* was visited July 26th, with a severe hail storm from the south-west, attended with vivid lightning, and heavy thunder. The hail-stones were three inches in circumference, and fell in great quantities.



AUGUST, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	74	74	76	N. W., S. W.	Cloudy. Sprinkle of rain.
2	75	78	79	N. W.	Clear.
3	70	73	75	N. E.	Clear.
4	71	75	76	N. E., S. E.	Overcast. Clear.
5	71	76	75	N. E. fresh.	Clear. Cloudy.
6	72	74	75	N. E. fresh.	Cloudy. Sprinkle of rain.
7	74	79	82	S. E., S. W.	Clear. Overcast.
8	66	70	70	N. W.	Cloudy. Rain at daylight.
9	69	73	75	N., N. E.	Clear.
10	70	74	75	N., N. E. fresh.	Clear. Cloudy. Small rain at night.
11	72	73	72	N. E. fresh.	Cloudy. Small rain.
12	72	73	74	N. E.	Cloudy. Rain.
13	74	78	80	N. E.	Clear.
14	72	76	80	N. E., S. W.	Cloudy. Clear.
15	76	79	82	N. E., E.	Clear. Cloudy. Showers, P. M.
16	76	77	78	N. E.	Cloudy. Light rain at daylight.
17	74	78	79	N. E.	Flying clouds. Clear.
18	74	79	80	N. E.	Clear.
19	76	80	84	N. E., S. W.	Clear.
20	80	86	86	S. W., E.	Clear. Cloudy. Sprinkle of rain, with thunder.
21	76	80	80	N. E., S. W.	Cloudy. Showers.
22	72	76	78	N. E., N.	Clear.
23	69	74	75	N. W.	Clear.
24	72	76	79	N. E.	Clear.
25	71	75	78	N. E.	Overcast. Clear.
26	73	76	74	N. E., S. E.	Overcast.
27	74	79	78	N. E., E.	Clear. Cloudy. Shower.
28	75	78	81	E., S. W.	Cloudy. Clear.
29	72	76	78	N. W., S. W.	Clear.
30	71	78	80	N. W., S. W.	Clear.
31	70	74	78	N. E.	Clear.

Total rain during the month - - - 3.21 inches.

Mean temperature - - - 75.57° Fahr.

Decrease of heat from last month - - - 10.86°

Maximum - - - 86°

Minimum - - - 66°

Range of Thermometer - - - 20°

Hottest day, 20th.—Coldest day, 8th.

*Comparison with August, 1825.*

Mean temperature - - - 0.34° less this year.

Maximum - - - 3° less

Minimum - - - 6° greater.

*August 1st.*—The town of Chatham, N. C. on the river Thames, was visited by a tornado, accompanied with rain and snow. For the width of a mile it pros-

trated houses, barns, fences, and trees. The snow covered the ground, and did not disappear for twenty-four hours.

*Richmond, Va. August.*—Two shocks of an earthquake have been lately felt in this city; one on the 9th, about nine o'clock at night, the other on the 14th, at twelve o'clock, M.

*New Orleans, Louisiana, August 10th.*—The weather, for many weeks past, has been extremely warm.

*Trenton, N. J. August 12th.*—After two day's threatening with clouds and wind from north-east, we had a heavy fall of rain. To the south and east of us the fall of rain was unprecedented. The roads are much damaged, and the meadows inundated.

*Camden, N. J. August 12th.*—A moderate shower of rain was experienced in this vicinity. In some remote parts of the country the rain descended in torrents, swelled the brooks and rivulets to an unusual and alarming extent, sweeping away bridges, mill-dams, and carrying almost every obstacle before the resistless fury of the current.

*Boston, Mass. August 14th.*—It has rained here, with little intermission, for four days and nights, in torrents, and continues without any appearance of change.

*New Bedford, Mass. August 15th.*—Rain has fallen almost continually for four days, accompanied by frequent flashes of lightning and heavy thunder. The quantity fallen since the 10th is nearly eleven inches.

*Wilksbarre, Penn. August 18th.*—A very brilliant meteor passed a little to the north of us, in the evening. It moved with a rapid pace until exhausted.

*Quebec, August 21st.*—For four or five weeks there has not fallen any rain, and the week just ended was the warmest experienced here for many years, the thermometer standing in the shade, at noon, at 92° to 93°. The drought has been severely felt in the district of Montreal and Three Rivers.

*York, Penn. August, 27th.*—One of the heaviest rains ever known, fell in the northern section of this county, along the Conawago river, while in this borough not as much fell as to moisten the dust.

*New York, August 28th.*—For nearly three weeks not a single day has passed, except the 26th, without copious showers during some part of the twenty-four hours; generally, however, the rain has descended at night, while the sun has shone the greater part of the day.

*Boston, Mass. August 31st.*—The weather for two days past has been remarkably pleasant. For the preceding nineteen days it rained almost every day, and during the greater part of the time. The quantity of rain which has fallen this month is 11.28 inches. The following table will show the quantity which has fallen since the beginning of the year.

January, 3.10 inches.	May, 0.37 inches.
February, 1.57	June, 3.80
March, 4.24	July, 3.
April, 2.07	August, 11.28

Most of the tributary streams of New England experienced a sudden and extraordinary rise, in consequence of the rain of August 28th. They rose from six to eight feet, and on the succeeding day to twelve feet, overflowing the banks and meadows, and occasioning great damage.

The malignant fever prevails at Mobile, Alabama.

## SEPTEMBER, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	70	77	78	N. E.	Clear. Overcast.
2	74	78	84	N. E., S.	Overcast. Clear.
3	78	83	84	S. W. fresh.	Clear.
4	79	84	86	S. W. fresh.	Clear. Cloudy. Large showers at 6 P. M. with heavy thunder and lightning.
5	78	82	84	S. W. fresh.	Clear. Overcast.
6	71	73	73	N. W. fresh.	Clear.
7	66	68	69	N. E. fresh.	Cloudy.
8	65	68	71	N., N. E.	Cloudy. Clear.
9	69	76	80	S. W. fresh.	Clear.
10	72	76	78	N. W. fresh.	Clear.
11	71	77	80	N. E., S.	Clear.
12	73	75	77	N. E.	Cloudy. A sprinkle of rain.
13	74	77	80	N. E., S. W.	Clear.
14	73	78	80	S. W., S. fresh.	Clear. Cloudy.
15	69	71	72	N. W. fresh.	Clear.
16	62	64	66	N. W. fresh.	Clear.
17	58	67	70	N. W., S. E.	Cloudy. Clear. Thermom. 50° at sunrise.
18	64	68	70	S. E., S. W.	Cloudy. Small rain.
19	67	68	68	N. W.	Cloudy.
20	64	69	70	N. E.	Cloudy. Clear.
21	65	71	74	S. W.	Clear.
22	69	74	77	S. W., S.	Clear.
23	72	73	74	S. W., S. E.	Cloudy.
24	60	61	59	N. E.	Cloudy. Rain.
25	57	58	60	N. E.	Cloudy.
26	58	64	64	N. E., E.	Cloudy. Rain.
27	72	77	79	S. fresh.	Overcast. Clear. Small rain.
28	69	68	66	N. W.	Cloudy.
29	60	64	66	S. W. fresh.	Clear. Thermom. 54° at sunrise.
30	60	64	66	N. W., S. W.	Clear. Thermom. 50° at sunrise.

Total rain during the month	-	-	-	-	-	2.10 inches.
Mean temperature	-	-	-	-	-	71.17° Fahr.
Decrease of heat from last month	-	-	-	-	-	4.40°
Maximum	-	-	-	-	-	86°
Minimum	-	-	-	-	-	57°
Range of thermometer	-	-	-	-	-	29°

Hottest day, 4th.—Coldest day, 25th.

*Comparison with September, 1825.*

Mean temperature	-	-	-	-	-	2.74° greater this year.
Maximum	-	-	-	-	-	6° greater.
Minimum	-	-	-	-	-	2° greater.



*Quebec, September 1st.*—Not more than four or five inches of rain have fallen since the middle of May. The drought and warmth of the summer in Lower Canada has been unparalleled.

*New York, September 12th.*—The drought in the western part of this state is excessive. In the vicinity of Cayuga Lake there has been no rain of consequence for ten weeks.

*Richmond, Virg. September 13th.*—Though we have a slight shower now and then, yet our creeks and rivers are still under the influence of the severe drought. The James' river is very low.

*Charleston, S. C. September 13th.*—A brilliant meteor passed over the city a few minutes before 7 o'clock P. M. Its course was from the north-west to south-east.

*Quebec, September 16th.*—The thermometer in the morning was at  $44^{\circ}$ , and snow fell a few miles below Quebec; the same thermometer on the 11th of July was at  $93^{\circ}$ , and on the 17th of August  $92^{\circ}$ .

*Dover, New Hampshire, September 26th.*—An apple tree is now to be seen here in full blossom.

The malignant fever prevails in New Orleans.

*St. Jago, Cuba, September 18th.*—In the morning between 3 and 4 o'clock, this city was visited with one of the most awful earthquakes that had been felt here for fifty years past, at which time nearly one-half of the town was destroyed. There were two shocks, the second more severe than the first, and the duration of each was about a minute. The noise resembled the rumbling of heavy loaded wagons, dragged over a paved archway, and finished with a tremendous explosion like the simultaneous discharge of an immense number of cannon. But few houses were thrown down, no lives lost, and the damage was comparatively trifling. Numbers of large fish were observed jumping and playing about the vessels in the harbour, just before the shock.

## OCTOBER, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	64	68	69	N. W. fresh.	Clear.
2	59	66	70	N. W., S. W.	Clear.
3	66	70	70	N. W.	Clear. Shower at daylight.
4	60	66	72	N. W.	Clear.
5	66	72	75	S. W., S.	Clear.
6	68	72	76	S. W.	Clear.
7	66	71	72	S. W., S. fresh.	Overcast. Cloudy. Small snow at night.
8	53	61	60	N. W.	Clear. Thermom. 46° at sunrise. Frost.
9	54	59	60	N. W.	Clear.
10	54	62	65	N., N. E.	Clear.
11	57	60	60	N. E.	Cloudy. Rain at night.
12	52	54	56	N. E., N.	Cloudy. Rain. Thunder and lightning.
13	57	59	61	N. E., N.	Cloudy. Small rain.
14	60	66	68	N. E.	Clear.
15	64	66	65	N. W., S. W.	Clear. Overcast. Small rain at night.
16	62	68	69	S. W., N. W.	Cloudy. Clear.
17	62	65	64	N., N. E.	Clear.
18	55	66	64	N. E., S. W.	Clear. Overcast. Rain at night.
19	64	65	64	W., N. W.	Cloudy. Sprinkle of rain.
20	53	55	57	N. E.	Cloudy. Rain day and night.
21	60	60	62	E., S. E.	Cloudy. Large rain.
22	54	56	59	N. W.	Overcast. Clear.
23	49	52	54	N. W. fresh.	Clear. Thermom. 42° at sunrise. Frost.
24	52	54	48	N. W. very fresh.	Clear.
25	40	48	50	S. W.	Clear. Overcast. Ice, A. M. Tomatice, Melangine, and Lima bean vines killed.
26	54	59	60	N. W., S. W.	Clear. Hazy.
27	45	48	49	N., S. W.	Clear. Ice, A. M.
28	40	53	54	S. E. fresh.	Cloudy. Thermom. 36° at sunrise. Rain with lightning and thunder at night.
29	56	58	58	S. W. fresh.	Cloudy.
30	56	60	61	N. W. fresh.	Clear.
31	48	56	58	N. W., S. W.	Clear. Thermom. 42° at sunrise.

Total rain during the month - - - 5.73 inches.

Mean temperature - - - 59.88° Fahr.

Decrease of heat from last month - - - 12.29°

Maximum - - - 76°

Minimum - - - 40°

Range of thermometer - - - 36°

Hottest day, 6th.—Coldest day, 25th.

*Comparison with October, 1825.*

Mean temperature - - - 0.59° less this year.

Maximum - - - 2° less.

Minimum - - - the same

*Norristown, Pennsylvania.*—On the morning of the 9th and 10th, we had for the first time this autumn sharp frosts.

*Washington, D. C. October 11th.*—The very warm days and nights of the last week, have been closely followed by temperate noons and frosty evenings. The thermometer so lately at 80°, now scarcely reaches to 60°.

*Norfolk, Va. October 11th.*—In the afternoon the wind freshened up from the northward and eastward, and during the evening increased to a heavy gale, accompanied with a deluge of rain, and an uncommon high tide all night. Towards morning the wind hauled round to the westward, but without abating its violence all day.

*Petersburg, Va. October 11th.*—It commenced raining moderately in the morning, and continued during the day, but not to such an extent as to create any apprehensions of a serious rise of water in the Appomattox. As night came on the rain increased, and at 12 o'clock it fell in a solid sheet, and continued till daybreak. The Appomattox river rose with unprecedented rapidity, and overflowed its banks to a considerable extent.

*New York, October 12th.*—About 3 o'clock in the morning a storm commenced, which lasted with but little intermission until late at night. It was very violent, and the rain poured down in torrents. In Pearl street, and all the streets below, many of the cellars are filled.

*Trenton, N. J. October 13th.*—A storm of wind and rain set in this town, and the adjacent country, on the 11th, and continued until this morning. Much damage has been done in various places, by the blowing down of forest and fruit trees, fences, &c. An immense quantity of rain has fallen, and the streams have generally overflowed their banks.

*Centreville, Maryland, October 14th.*—The weather has undergone a pleasant change within the present week, and the frosts have checked our local fevers. The past summer has been very unhealthy, particularly throughout the eastern shore of Maryland.

*St. Johns, N. B. October, 25th.*—To day we had a regular snow storm, the first this season. It did not lay long.

The malignant fever prevails at Norfolk, Virginia.



## NOVEMBER, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	59	59	59	S. W.	Cloudy. Rain. Before daylight it blew a gale from S.
2	60	61	62	N. E.	Cloudy.
3	55	58	57	N. W.	Clear.
4	40	43	35	N. E.	Cloudy. Thermom. 34° at sunrise. Snow and hail fell for two hours P. M. which melted as it fell. Rain at night.
5	37	39	42	N. E.	Cloudy.
6	47	49	50	N. E.	Cloudy. Thermom. 40° at sunrise.
7	54	60	64	S. W.	Cloudy. Clear. Gale at night from S. E.
8	48	50	52	N. W.	Clear.
9	44	52	52	S. E. fresh.	Clear. Cloudy. Ice at daylight.
10	48	53	53	S. W. fresh.	Clear.
11	46	49	51	N. W.	Clear.
12	46	53	58	S. W.	Clear.
13	40	42	47	N. W.	Clear. Thermom. 36° at sunrise.
14	40	43	45	S. E., S. W. fresh.	Cloudy. Frost.
15	53	59	60	W.	Clear.
16	49	55	58	W., N. W.	Clear.
17	59	61	63	S., S. W. fresh.	Cloudy. Rain. A gale from S. W.
18	48	49	45	N. W.	Clear. Cloudy. A gale from N. W. at night.
19	32	39	40	N. W.	Clear. Flying clouds. A spitting of snow.
20	36	43	43	N. W.	Clear.
21	38	41	42	N., N. W.	Cloudy. Clear.
22	36	39	41	N. W.	Hazy.
23	35	38	39	N. W.	Cloudy. Sprinkle of snow.
24	35	40	40	N. W.	Clear.
25	37	41	45	W., N. W.	Clear. Overcast. Rain at night.
26	55	60	53	S. W. a gale.	Cloudy. Rain all day.
27	36	40	41	S. W.	Clear. Cloudy.
28	38	41	40	W.	Cloudy. Clear.
29	34	39	41	S. W.	Clear.
30	40	44	49	S. W.	Overcast.

Total rain during the month - - - - 1.89 inches.

Mean temperature - - - - 47.02° Fahr.

Decrease from last month - - - - 12.86°

Maximum - - - - 64°

Minimum - - - - 32°

Range of thermometer - - - - 32°

Hottest day, 7th.—Coldest day, 19th.

*Comparison with November, 1825.*

Mean temperature - - - - 1.65° greater this year.

Maximum - - - - 6° less.

Minimum - - - - 2° greater.

*Pittsburgh, Penn. November 3d.*—The river is now two feet above low water mark, and continues rising.

*Halifax, Nov. 2d.*—On the opposite shore at Dartmouth, wild strawberries are in full bloom, and second crops of potatoes have been raised from seed, cut out of the first crop. They are of an ordinary size.

*Milledgeville, Geo. Nov. 7th.*—There has not been enough frost to injure the tenderest plant. The cotton fields in the neighbourhood are full of blossoms, and on the eve of winter we have weather almost as warm as midsummer.

*Boston, Mass. Nov. 18th.*—Snow has fallen this season in Montreal, Quebec, &c. to the north, New Brunswick, &c. to the east, and in Trenton, Philadelphia, &c. to the south, but not a flake has been seen here. There are many alive who all recollect, that on or before the Pope day's, (5th of November,) of olden times, there were for many years in succession snow and good sleighing.

*Montreal, Canada, Nov. 14th.*—There was a gradual fall of snow from 12 until 3 o'clock. The ground is covered.

*St. Louis, Missouri, Nov. 16th.*—The weather continues remarkably warm.

*Charleston, S. C. Nov. 20th.*—On the night of the 18th we had a black frost, and yesterday we saw ice 3-16ths of an inch in thickness.

*Wilmington, N. C. Nov. 22d.*—A continuance of very warm weather for two weeks past, has occasioned a return of sickness to the town and surrounding country. Some white frosts, and much ice have been lately formed, and will soon dissipate all remaining sickness.

*New York, Nov. 23d.*—The sky has been frowning upon us for several days, and about 5 o'clock this morning a snow storm commenced which continued several hours. Considerable snow has fallen to the north and west. The Quebec Mercury of the 14th, states that the weather was remarkably cold for the season. On that day a storm of snow commenced.

*Baltimore, Nov. 26th.*—Before daylight, and in the afternoon, the rain poured down in torrents, accompanied by heavy thunder and lightning.

## DECEMBER, 1826.

DAYS.	FAHRENHEIT'S THERMOMETER.			WINDS.	WEATHER.
	9 A. M.	12 M.	3 P. M.		
1	45	48	47	S. W.	Clear.
2	37	38	38	W., N. W.	Clear.
3	30	31	31	N. W.	Clear.
4	29	32	33	N. E.	Cloudy.
5	33	37	39	N. W.	Clear.
6	39	42	44	N.	Hazy. Clear.
7	45	47	49	S. W.	Overcast. Hazy. Very heavy dew.
8	49	56	59	S. E.	Cloudy. Wind fresh at night.
9	55	48	47	N. W.	Cloudy. Rain.
10	35	37	42	W., N. W.	Clear. Overcast.
11	36	38	39	S. W.	Overcast. Clear.
12	35	37	41	S. W.	Clear. Overcast.
13	37	43	44	S. W.	Clear.
14	37	41	40	S. W., N. W.	Clear.
15	36	44	46	S. W., W.	Clear.
16	44	50	53	S. W.	Clear.
17	55	56	57	S. W., N. W.	Cloudy. Clear.
18	43	45	43	S. W., N. E.	Cloudy. Small snow and rain.
19	37	38	36	N. W.	Clear. Cloudy.
20	32	36	36	N. W.	Clear.
21	38	42	45	S. E.	Cloudy. Rain.
22	36	41	41	S. W., N. W.	Clear.
23	30	34	35	N. W.	Clear.
24	25	28	29	N. W.	Clear.
25	26	24	26	N. W.	Clear.
26	32	34	32	S. W.	Cloudy. Snow, rain, and hail.
27	31	28	22	N. W.	Overcast. Clear.
28	11	16	17	W.	Hazy. Cloudy. Ice floating in the Delaware.
29	16	21	25	N. E., N.	Hazy. Clear.
30	23	26	27	W., N.	Cloudy. Snow. Clear.
31	24	28	28	N. W.	Cloudy. Clear.

Total rain during the month - - - 1.50 inches.

Mean temperature - - - 36.90° Fahr.

Decrease of heat from last month - - - 10.12°

Maximum - - - 59°

Minimum - - - 11°

Range of thermometer - - - 48°

Hottest day, 8th.—Coldest day, 28th.

*Comparison with December, 1825.*

Mean temperature - - - 1° greater this year.

Maximum - - - 3° greater.

Minimum - - - 1° less.



Months.	THERMOMETER.						Number of Fair days.	Number of Cloudy days.	Depth of Rain.	Prevailing Winds.	Prevailing Weather of each month.
	Mean Tem- perature.	Maximum.	Minimum.	Range of Thermom.	Hottest days.	Coldest days.					
January	34.60°	54°	12°	42°	10th	31st	17	14	1 23-100	S. W., N. W.	Dry and moderate.
Feb.	37.60	63	11	52	25th	1st	12	16	2 41-100	N. W., S. W.	Moderate, dry and agreeable.
March	45.02	69	31	38	24th	17th	13	18	3 65-100	N. W., N. E.	Cloudy and cool.
April	50.52	75	31	44	18th	11th	11	19	2 79-100	S. W., N. W.	Cloudy, cool and unpleasant.
May	74.56	86	56	30	17th	9th, 10th	18	13	0 18-100	S. W., N. W.	Very warm, fair and dry.
June	72.17	87	59	28	11th	6th	14	16	4 96-100	S. W., N. E.	Cloudy, wet and favourable to vegetation.
July	86.43	86	67	19	13th	27th	25	6	4 75-100	N. W., S. W.	Fair, warm and moist.
August	75.57	86	66	20	20th	8th	14	17	3 21-100	N. E., S. W.	Cloudy and moderate.
Sept.	71.17	86	57	29	4th	25th	13	17	2 10-100	S. W., N. E.	Cloudy and temperate.
October	59.88	76	40	36	6th	25th	17	14	5 73-100	N. W., S. W.	Fair, wet and moderate.
Nov.	47.02	64	32	32	7th	19th	17	13	1 89-100	N. W., S. W.	Dry, pleasant and agreeable.
Dec.	36.90	59	11	48	8th	28th	15	16	1 50-100	N. W., S. W.	Variable, cold and dry.

Prevailing winds of the year, S. W., N. W.

Total rain of the year, 34 40-100 inches.

Hottest month, July.

Coldest month, February.

Greatest range of thermometer occurred in February, 52°.

The mercury was the highest June 11th, 87°—lowest, December 28th, and February 1st, 11°

Thunder and lightning occurred in fourteen days.

Mean temperature of the year, 54.54°.

Mean temperature of 1825, 56.98°.

The temperature of the whole year was moderate, with the exception of May, which was remarkably hot and dry. An abundance of rain fell during the summer months, and vegetation of all kinds was very prolific.

## MEDICAL LITERATURE.

ART. XV. *Memoir of the Life and Writings of the late COLIN CHISHOLM, M. D., F. R. S. &c. &c. formerly Inspector General of Ordnance Hospitals in the West Indies.\**

A MILITARY life, under ordinary circumstances, seldom affords a favourable scope for the development of medical genius. The previous education, and peculiar habits of his profession, in some measure, unfit the medical officer for the passive duties of a subordinate sphere, whilst the various restraints and checks to which he becomes subject by the ungenial nature and undefined liabilities of military control, are so many discouragements to the acquirement of that elasticity and vigour of mind so essential to the improvement of the mental faculties. Notwithstanding these serious difficulties, added to those more immediately arising, in former days, from an imperfect organization of the medical department itself, and its undue estimation and respectability in the service in regard to rank and emolument, both the army and navy have given birth to many whose genius, surmounting the ordinary disadvantages of their station, has raised them to the first rank in medicine and surgery: not to mention several living instances of men whose knowledge and experience render them ornaments to medical science.†

Dr. Colin Chisholm, the subject of the following biographical sketch, was also one of those who commenced his career in the service of his country. He was a native of Invernesshire, in the north-west part of Scotland, where he was born in the year 1755.

He received his classical education at Inverness, and at Aberdeen, and studied medicine and surgery at Edinburgh. At an early age he entered the army, having been appointed surgeon to a corps of Highlanders, in the year 1775. This corps, of which the late Dr. ROBERT JACKSON, the eminent writer on army diseases, was the then assistant surgeon, became afterwards the second battalion of the seventy-first, (Highland,) regiment, and, together with the forty-

\* We are indebted for this communication to Professor Hosack.

† Among the former, it may be sufficient to instance the names of Wiseman, Pringle, Cleghorn, Monro, Brocklesby, Hunter, &c.

second regiment, being destined for actual service in North America, sailed from Greenock for that country, in April, 1776; the sick of both corps being placed under Dr. Chisholm's superintendance during the passage. He continued to serve with the seventy-first regiment, in different parts of America, during the whole of the revolutionary contest. When peace was concluded, in 1783, he was placed on half-pay, and settled as a physician at St. Georges, the capital of Grenada, in the West Indies. A few years after he had established himself here, and principally, it is supposed, through the interest of his friend the late Dr. JOHN ROLLO, he was appointed his successor as surgeon to the ordnance stationed in that island. In the summer of 1794, he returned to Britain, the first time since his settlement in the colony, and, in the course of that year, married Miss Eliza Cooper, an amiable young lady of Inverness. In the autumn of 1795, he had conferred upon him the rank of surgeon-general to the ordnance employed upon the expedition under the command of that lamented and gallant officer, the late General Sir RALPH ABERCROMBY, which sailed from Portsmouth for the West Indies, on the 15th November of that year; but which, from heavy storms, and consequent disasters, was unable to reach its destination till the spring of 1796, and then only with the loss of several transports, shipwrecked or driven back by the great inclemency of the weather, which lasted for many successive weeks. In the year 1797 he received the appointment of inspector-general of ordnance hospitals in the Windward Islands. In this capacity, it became his duty to visit in person and regulate all the artillery hospitals in the different islands; a tour which afforded him abundant and profitable opportunities for instituting medical and statistical observation, and inquiries in that country, on a scale, and to an extent, seldom enjoyed by a single individual.

When the intended object of this appointment appeared to have been fully accomplished, the board of ordnance were highly sensible of his merits, and as a flattering testimony of their full approbation of his services, permitted him, at his own request, to retire from the department, granting him what was at that *time* deemed a handsome allowance, namely, ten shillings per diem for life.

We have now arrived at a period which forms an important epoch in the professional life of Dr. Chisholm; we are next to consider him in the character of an author; but more particularly, as the founder and ardent supporter of particular medical opinions, and doctrines relative to contagion, which furnished a wide and fertile subject for inquiry and keen controversy, amongst a certain class of medical authors and practitioners for many years afterwards.



In the year 1794, that is, immediately or very soon after his return to England the first time, he published a book, in one volume octavo, entitled "An Essay on the Malignant Pestilential Fever introduced into the West Indies from Boullam on the Coast of Guinea, as it appeared in 1793 and 1794." In this work, and under the above title, the doctor characterized a fever which, about that period, prevailed in a great and fatal degree, especially amongst the troops, in almost all the British West India islands. This fever he unequivocally pronounced to be highly and specifically contagious; and affirmed to have been introduced, or imported, in the first instance, into Grenada, (where it proved very fatal to the inhabitants of the colony,) through the medium of a ship called the *Hankey*; which vessel arrived there from the coast of Guinea in Africa, in the month of February, 1793; and, moreover, that this fever was propagated from thence, as from a common centre, to the other islands of the West Indies.

Whether the fever in question, so ably described by Dr. Chisholm in that valuable publication, actually and essentially differed otherwise than in degree from aggravated forms of tropical, or what is usually, but vaguely denominated, yellow fever, which, it is well known, have, on different occasions, and under unfavourable circumstances, made great and extraordinary havoc in the islands of the Antilles; or whether it was, as the doctor asserted it to be, a specific contagion, a *nova pestis*, imported, in the manner before stated, it is not within the scope or design of this memoir to inquire; particularly after the volumes which have been written by both sides on this disputed point.

Non nostrum est inter *hos* tantas componere lites. It may be sufficient for us to observe, that the high professional reputation, and integrity of character, which the author had justly acquired and sustained, during his long residence in the West Indies, added to the sterling merits of the work itself, gave such decided weight, and authority to the opinions and doctrines therein promulgated, that at first few persons were to be found sufficiently competent or venturous to impugn them: and, in that quarter of the world, at least where their soundness or fallacy could be best appreciated, they appeared to have been received, for a very considerable time, with nearly universal consent.

In a second edition of the essay on malignant "Pestilential Fever," published in 1801, in two volumes, the doctor firmly adhering to his former opinions, widely extended the sphere of operation imputed to imported and specific febrile contagion; comprehending within its

vortex, and identifying the Boullam fever with the epidemic yellow fever which prevailed, with great fatality, about the autumn of 1793, and in subsequent years at Philadelphia, New York, and other places; and ascribing all those fevers to one common origin, namely, contagion, imported into, and communicated from the West Indies. The extension and devastating effects thus attributed to contagion, disseminated in such various and remote parts of the globe, may, in some measure, enable us to account for the accuracy of the doctor's hypothesis being questioned, and from the increasing opposition which his doctrine met with, and to which he indeed alludes in the same edition of his essay, for it may reasonably be supposed that some persons who had become willing converts at first, and, to a certain degree, implicitly bowed to his opinions as to the existence of incidental contagion; but who were not prepared to go so far as doctor Chisholm in ascribing to it a contagious quality of a specific nature, and far less in identifying it with destructive fevers which prevailed in other, and such very distant regions of the earth.

Some of the army medical officers, serving at that period in the West Indies, had, it seems, already doubted the soundness of his opinions; but it does not appear that his doctrines had as yet met with any serious or direct opposition through the medium of the press, until the year 1807, when Drs. MILLER and SMITH of New York, the former gentleman being the editor of the *New York Medical Repository*, publicly entered the lists of opposition in an official report addressed to the governors of the state of New York. In 1811 Dr. EDWARD NATHANIEL BANCROFT, physician to the forces, an able and ample writer upon the same side, and by far his most powerful antagonist, may be said to have embodied every argument that would bear upon the question. On the other hand Dr. Chisholm, supported and strengthened by the testimony and conviction of professional men of unquestioned eminence, published an animated reply to his opponents, in order, as he states, "to correct the pernicious doctrines promulgated by Dr. Edward Miller, and other American physicians." This reply appeared in 1809, in an octavo volume, under the title of "A Letter to JOHN HAYGARTH, M. D., F. R. S. &c." In 1813 Dr. Chisholm also wrote a very spirited answer to the remarks of Dr. Bancroft, which appeared in the *Edinburgh Medical Journal*, for October, 1813.

This important controversy, involving in its progress many men of distinguished talents on both sides, and pervading almost every quarter of the world, was maintained with all the zeal and ardour

which its importance warranted, and which is usually manifested by its warmest partizan.

Polemical writings, however displeasing to the disputants, if conducted with perfect candour and dignity, are undoubtedly instrumental to the advancement of knowledge,\* important facts, and new lights are often elicited by the controversialists, in support or refutation of their respective hypotheses; so that the calm and dispassionate inquirer, by reasoning upon, examining, and comparing the facts and legitimate arguments propounded by each party, has a better chance of discovering the truth, and forming a right judgment, than a person who should come to the inquiry with a mind previously made up, or at least tinctured with the tenets and dogmas of party. On a point of such importance to the health, and safety of the human race, and to the commercial and political interests of the community, this eager controversy was of no small advantage; and, although the points at issue among the disputants for so many years, have not been so satisfactorily accorded as could be desired, yet the acrimony of the contest is worn off, and this once intricate, and much agitated question, has been so much narrowed, that its discussion has been productive of considerable benefit, not only to the profession, but to the human race.

After his return from the West Indies, Dr. Chisholm resided chiefly at Bristol, or Clifton, where his talents as a physician, we understand, were highly estimated. His time was in a great measure divided between his professional pursuits and writing contributions to medical science; the latter, (some of which are very valuable,) were, for the most part, published in the form of essays in the *Edinburgh Medical Journal*, one of the oldest and most respectable periodical publications in Europe, and edited by his friend Dr. DUNCAN. A list of his writings is annexed to this memoir. In the year 1819 Dr. Chisholm went over to Switzerland for the better education of his children, and resided mostly at Geneva. During the leisure afforded by this Alpine retirement, he wrote, and bequeathed to his surviving professional brethren his last essay, entitled “*A Manual of the Climate and Diseases of Tropical Countries, &c.*” Of this work, which is chiefly intended for young tropical practitioners, and which was avowedly undertaken at the desire of, and is dedicated to his old and esteemed friend, Sir JAMES M‘GRIGOR, director-general of

\* Truth results from discussion and from controversy.—*Paley’s Mor. and Polit. Philos. Vol. II. p. 346.*



the army medical department; himself a valuable contributor and benefactor to medical science and improvements; of this work, whether we regard its intrinsic merits, or its practical utility, it is impossible to speak in terms of too high commendation. After the completion of this work, Dr. Chisholm made a tour through Switzerland and Italy, and returned to England in May, 1824. He had been for some time suffering under a painful malady, of which he died on the 2d of February, 1825, in the 69th year of his age, at old Burlington street, London.

On a review of the writings of Dr. Chisholm, it will be allowed that his talents, both as a physician and as an author, were of a superior order. Altogether he must be regarded as a man of no ordinary science. To the possession of great industry, a mind ardent and enlightened, he added literary and philosophical acquirements, in a very considerable degree. His writings are distinguished by a style, at once perspicuous, classical, and nervous; characterized, at the same time, by a warmth and earnestness of language, certainly not always conciliatory in his controversial essays, and which convey an appearance of acerbity, particularly to those persons whose opinions it was his object to combat. In controversies not governed by the rules of strict impartiality, it is too often the practice of the disputants, to suppress, garble, or overlook facts and circumstances which militate against their own opinions; to permit their passions to have a share in the question; to be over-strenuous in their own cause; more ready and anxious to impute error to their opponents than to acknowledge it in themselves, and search after truth purely for its own sake. In regard to the controversy in which Dr. Chisholm was involved, we may observe, that, when carried away by his earnestness in maintaining his tenets, the manner of reasoning which he adopted was not always the best calculated to propitiate and convince his opponents; yet his arguments were the result of conviction, expressed with an honest and manly freedom, and dictated by a mind zealously directed to the cause which it was his grand object to defend.

His professional knowledge and experience we have already said was highly appreciated in the West Indies, and he doubtless is entitled to the meed of praise for his meritorious labours in the field of medical science. He was the first to recommend and inculcate a more liberal employment of mercurials, and of introducing an improved and more decided line of treatment in the fevers of that country—a practice that had, to a great degree, obtained, and been found successful in the same class of diseases in India.

With respect to his medical doctrines it may be said, that if uniform and consistent faith, entertained for a long course of years; if sincerity, uprightness of intention, and moral excellence, give an additional portion of weight and validity to his opinions, Dr. Chisholm, to the day of his death, steadfastly adhered to, and most conscientiously believed in all he had written upon the subject of contagion, while the correctness of his pathological and therapeutical views on febrile diseases, was confirmed and exemplified by the success of his subsequent practice.

“In private life, Dr. Chisholm,” to use the words of a dear and very intimate friend, “was most amiable, and for the world, too much devoid ‘of guile;’ in the relations of husband and parent, ‘affectionate and indulgent.’”

Dr. Chisholm enjoyed the friendship and correspondence of several eminent men. He was one of the oldest Fellows of the Royal Society, a member of the Wernerian Society of Edinburgh, of the Philosophical, Medical, and Natural History Societies of New York and Philadelphia; of the Physical and Natural History Society of Geneva; and of the Helvetic Society, for promoting the science of Switzerland.

It is understood that Dr. Chisholm has left a valuable MS. on the medical topography of the countries he visited on the continent, which it is hoped will be given to the world.

Whatever professional opponents Dr. Chisholm may have unfortunately left behind him, it is certain that he himself died in Christian charity and good will to all. It is not perhaps possible to produce a more affecting, pious, and sincere valedictory address, nor one more calculated to disarm hostility, than that which, in reference to medical controversy, he makes to his professional brethren in his last publication, the “Manual of Tropical Diseases,” with a short extract from which we shall conclude this sketch. “If ever,” says the truly benevolent author, “any remark, or any language of mine have given pain or offence; if ever I have betrayed animosity in the maintenance of my own, or asperity in the consideration of another’s opinion; fully aware of the absurdity of a conduct, which the frailty of human nature, and the limited knowledge and capacity of man can give no sanction to, I here solemnly abjure, and intreat pardon for.”\*

\* Manual of Tropical Diseases, p. 233.

*A List of the Publications and Writings of the late Dr. Chisholm, as far as they are known to the Author of the foregoing Memoir.*

PUBLICATIONS.

1. An Essay on the Malignant Pestilential Fever introduced into the West India Islands, from Boullam on the Coast of Guinea, as it appeared in 1793 and 1794. 8vo. 1794.

2. A second edition, greatly enlarged, of the same work. In 2 vols. 8vo. 1801.

3. A Letter to John Haygarth, M. D., F. R. S. Lond. and Edin. &c. from Colin Chisholm, M. D., F. R. S. Author of an Essay on the Pestilential Fever, exhibiting farther Evidence of the Infectious nature of this Fatal Distemper in Grenada, during 1793-4-5-6, and in the United States of America, from 1793 to 1805, in order to correct the pernicious doctrines promulgated by Dr. Edward Miller, and other American Physicians, relative to this destructive Pestilence. In 1 vol. 8vo. 1809.

4. A Manual of the Climate and Diseases of Tropical Countries, in which a Practical View of the Statistical Pathology, and of the History and Treatment of the Diseases of those Countries is attempted to be given. Calculated chiefly as a Guide to the young Medical Practitioner, on his first visiting those countries. 1 vol. 8vo. 1822.

ESSAYS OR PAPERS.

*In the Edinburgh Medical and Surgical Journal.*

1. History of a Singular Affection of the Liver, which prevailed epidemically in some parts of the West Indies, Anno. 1786.

2. Observations on the Influenza, as it lately appeared in the West Indies. 1790.

3. History of an uncommon Epidemic Fever observed in the Island of Grenada. 1793.

4. Remarks on the Bignonia Ophthalmia, or Eye Root. 1794.

5. Cases of Yaws and Leprosy treated with Nitrous Acid and Oxygenated Muriate of Potash. 1800.

6. Curious Case of Spasmodic Affection of the Face, cured by the Oxygenated Muriate of Potash. 1800.

7. A short account of the Epidemic Polypus of Grenada, in 1790.

8. On the Poison of Fish. 1808.

9. Case in which the Cæsarian Operation was successfully performed, twice on the same woman. 1808.

10. On the Lues Bovina Intertropia. 1810.

11. An Essay towards an Inquiry how far the Effluvia from Dead



Bodies passing through the natural Process of Putrefaction, are efficient in the production of Malignant Pestilential Fevers. 1810.

12. Case of Ruptured Spleen and Liver by External Injury, with Remarks. 1811.

13. Letter on the Yellow Fever at Perth Amboy, with a Report of the Board of Health at New York on Yellow Fever. 1812.

14. Observations on some Remarks of Dr. Bancroft, contained in the Seventh Appendix to his Essay on the Disease called Yellow Fever; together with Additional Testimonies.

15. Remarks on Contagious Fevers. 1814.

16. On the Malis Dracunculus, or Guinea Worm. 1815.

17. On the Statistical Pathology of Bristol and Clifton, Gloucestershire. 1817.

*In the Medico-Chirurgical Transactions of London, Vol. IV.*

Remarks on the Use of Mercury in severe Affections of the Brain. 1813.

*In the New York Medical and Philosophical Register.*

1. Observations on Arsenic and Muriate of Lime in the treatment of Scrofula.

2. On the Oil of Turpentine.

3. On Contagious Diseases.

4. On the Varieties of the Human Species.

5. Account of a Nation of Pigmies.

*In the New York Medical Repository.*

An Account of the Cachexia Africana.

## REVIEW.

ART. XVI. *Recherches Anatomiques, Pathologiques et Thérapeutiques sur la Maladie connue sous les noms de Gastro-entérite, Fièvre Putride, Adynamique, Ataxique, Typhoid, etc. etc. Comparée avec les Maladies Aigues les plus Ordinaires.* Par P. CH. A. LOUIS, Docteur en Médecine des Facultés de Paris et de St. Petersbourg, Membre de l'Académie Royale de Médecine, Correspondant de l'Académie Imperiale Medico-Chirurgicale de St. Petersbourg, de celle de Marseille, chef de Clinique de la Faculté de Médecine de Paris, etc. etc. Two vols. oct. pp. 989. Paris, 1829.

THE nineteenth century, so far as it has elapsed, forms a brilliant era in the history of medical science. In the wide range of twenty centuries, which exact history claims as her own, we here and there may mark the recorded labours of a great and distinguished genius, which shine with redoubled splendour amid the surrounding darkness; and we may also notice occasional groups of distinguished contemporaries improving and adorning the respective ages in which they flourished. It was, however, reserved for the present era, by an unanimity of co-operation unexampled in past ages, to place medical science upon the firm bases of correct observation, critical research, and strict philosophical deduction—to discard all idle speculation and vain hypotheses, and by endowing it with the attributes of an exact science, to render utterly inapplicable to it, at no very distant period, the opprobrious epithet of *ars conjecturalis*.

This prosperous state of the science, brightened by such anticipations of prospective improvement, may be ascribed, mainly, to the splendid, useful, and imperishable accessions which have been afforded to it by the genius and industry of BICHAT and his élèves. The views of Bichat necessarily opened a large and unexplored field for pathological researches. His *Anatomie General* must be adopted as the foundation of all correct pathological investigation, and the impulse which his researches and example have given to the medical inquiries of the present age, cannot but be attended with the happiest results, when the present *system of physiological medicine* shall have become better understood and more extensively adopted. Notwithstanding the difficulties which physiological medicine has to contend

with, arising from the inveterate habits, and accumulated prejudice of centuries, yet it, nevertheless, has made steady and rapid advances, and we are almost daily called upon to present to our readers brief notices of some of the more important works, expressly devoted to this subject, which are crowding upon us with irresistible claims to attention.

The work, whose title is prefixed to this article, bears a deep impress of the character of the medical philosophy of the present time. Its author is well known to the medical profession, and has acquired considerable, and justly deserved celebrity, by his able and extensive anatomico-pathological researches, on the softening with thinning, and the destruction of the mucous coat of the stomach; on hypertrophy of the muscular coat of the stomach in cancer of the pylorus; on perforation of the small intestines; on croup in adults; on pericarditis and various other morbid affections; and by his elaborate and ingenious treatise on phthisis pulmonalis. The work under review is calculated to add, in no inconsiderable degree, to his well-earned reputation. It displays a zeal and devotedness for the improvement of the profession, an exactness of observation and talent for analysis and arrangement, calculated to demand our warmest approbation. It embraces, in two octavo volumes, between 900 and 1000 pages, and is divided into four parts. *The first part* is devoted to the history of eighteen fatal cases of typhus fever, in which the symptoms of the disease, and the morbid lesions are equally well developed.

*In the second part* we have presented to us a general description of the lesions, or morbid anatomical changes, both among subjects who have died of this disease, and among others who have sunk under other acute affections; with an exposition of the principal causes of death in these two classes; terminated by a rapid sketch of all the changes successively described.

*The third part* contains, in so many distinct chapters, the history of the symptoms in those who have died, and those who have recovered; that is to say, a distinct chapter for each respective symptom; the diagnostic indications; observations relative to subjects in whom the typhus affection was latent; those in whom its anatomical characters were slightly developed; and others who experienced the greater part of the symptoms characteristic of this disease without being really affected.

*The fourth part* presents an analysis of the facts relative to the action of blood-letting, to tonics, to blisters, the application of ice to the head, and terminates by an exposition of the principal rules for the treatment.



Such being a brief summary of the primary divisions of the work, we will present a little more particularly, but at the same time very briefly, the contents of these respective portions.

The first division of this treatise embraces one hundred and fifty-seven pages, and is devoted exclusively, as has been already remarked, to the recital of eighteen cases of typhus fever, arranged into three groups according to the respective periods of their fatal termination. The first chapter contains the history of seven patients who died from the sixteenth to the thirtieth day of the disease; the second chapter contains the histories of six cases, which terminated fatally from the eighth to the twelfth day; the third chapter contains the histories of five cases, in which death did not occur until after the thirtieth day.

By this arrangement, the author is enabled not only to present the various symptoms which indicate this disease in its acute as well as more protracted forms, but also to mark the numerous and diversified lesions and their respective correspondence with the previous symptoms and their duration.

With the view of bringing distinctly before the reader the disease under consideration, we shall invert in some measure the order pursued in the work itself, and present, previously to the anatomical characters of the affection, a summary and collected view of its various symptoms which the author has prefixed to the more enlarged and particular consideration of each respective symptom.

*1st. Symptoms observed in those who Sunk under the Disease.*—The subjects of this affection were young, from seventeen to thirty years of age, the medium term twenty-three years, none exceeding forty years. Almost all, previously to the attack, were habitually in good health, of constitutions sufficiently vigorous, moderately corpulent, and had resided at Paris for a short time only. At the period of the attack, they were placed under various circumstances; some had been accustomed to excessive labour, the most part to moderate exertions: a portion had suffered for some time from anxiety and mortification; the most part felicitated themselves on being at Paris, and enjoying better nourishment than they had heretofore partaken of; and, with scarcely any exception, they had not suffered from privations of any kind.

The disease commenced at different periods of the day, generally in the morning; ordinarily with decided violence, by chills accompanied with trembling, head-ache, universal lassitude, anorexia, thirst, some pains of the abdomen, and in a majority of the cases liquid stools were superadded to these symptoms during the first twenty-four

hours. Heat succeeded to the chills, which were renewed for many days in succession among almost all subjects, ordinarily in the evening, or at bed-time. Afterwards the heat was permanent, more or less intense, and almost always dry.

These symptoms, which had nothing characteristic, and only indicated that the affection had its seat in the abdomen, presented in the following manner:—

The patients experienced a feebleness, little proportioned to the other symptoms and the apparent severity of the affection; the dizziness was such as either to confine them to their seats or prevent their walking when erect; they were affected with somnolency, at first in a very slight degree, very soon to a considerable extent, so much so that they immediately fell into this state when no longer interrogated. The memory, although ordinarily sufficiently correct, was slow; there was great repugnance to the exercise of the intellectual faculties, indifference to passing occurrences, and almost always such disregard to their own situation, that many of those who had involuntary stools did not ask to be cleansed. Although in a state of continued drowsiness, they complained of not sleeping, or of having but a fatiguing sleep, disturbed by reveries, which they endeavoured in vain to resist. Delirium was combined, in many cases with the somnolency; the first very rarely commencing until two, three, five, or six days or more after the other. The delirium was sometimes slight, only existing during the night; sometimes a little more marked and almost continued; sometimes the patients were excited in so furious a manner that they were obliged to be restrained in their beds with force. The somnolency continued until the fatal period, with the exception of some cases in which the affection was considerably protracted. Tinnitus aurium occurred in a considerable number of cases, united, occasionally with some hardness of hearing, which commenced a little later than the tinnitus, augmenting by degrees, and becoming in some cases so extreme as to amount to entire deafness.

The eyes were injected, more or less sharp or piercing, sometimes of an uniform rose tint, very rarely, however, from the beginning. The vision in some cases was confused, objects appearing as if surrounded by a thick cloud, although the atmosphere was transparent. A slight strabismus occurred in one case. Many patients had hæmorrhages from the nose, from which they did not experience any relief.

The most part of the cases presented on the surface of the body an eruption of lenticular rose-coloured spots, more or less approximated to each other, ordinarily towards the tenth day of the affection, rarely at the seventh, never before; and this eruption did not vary less in

its duration than in its quantity. Sudamina was very frequently united to this eruption.

The abdomen was tympanitic, preserving very rarely to the close of the disease its natural size and form. The tympanitis in some subjects always remained inconsiderable, while in others it became progressively more marked, increasing in such a manner, among a certain number, that the summit of the abdomen surpassed in elevation the level of the chest.

During the period of the existence of these three orders of symptoms, all more or less characteristic, the diarrhœa developed itself, ordinarily increasing as the disease progressed; the stools becoming involuntary notwithstanding the delirium was considerable, and in some cases the fecal evacuations were united with a considerable quantity of blood. The tongue, which, in a considerable number of cases did not present any thing remarkable, was ordinarily clammy or dry; sometimes brown or red, encrusted or clean, chopped or sound, blackish in some patients, more or less thick in others. In many cases it could not be protruded out of the mouth but with difficulty and trembling, and after protrusion it was suffered to remain between the teeth, the patient apparently forgetting to retract it. The deglutition was sometimes difficult: the pharynx more or less inflamed. Some complained of pains at the epigastrium, and nausea; a considerable number were seized with vomitings, which occurred, ordinarily, in the last stage of the affection.

The debility became each day more marked, the patients trembled when standing, having the walk of intoxicated persons, and even complained sometimes of being so. The debility increasing, they could with difficulty assist themselves, and very soon became, in a great measure, helpless, passing all, or the greater part of the day, in the same position, ordinarily on the back, resembling as it were inert bodies. In this state the integuments which covered the sacrum became red, excoriated, and were more or less promptly attacked with gangrene. The blistered surfaces, which were covered with pus of a bad quality, presented a livid colour; and, in some cases, ulcerations, and even a complete destruction of the skin to an extent more or less considerable.

The heat was dry, ordinarily very elevated; chills did not occur except in some rare cases, and indicated the commencement of some secondary lesion, erysipelas for example. The pulse continued greatly accelerated, beating one hundred strokes or more in the minute, very rarely less; losing its size which it had in the greater number of subjects in the beginning, becoming small, feeble, hard, and ir-



regular; while in some it preserved a certain magnitude even until death.

The cough which existed in the greater number of cases was rarely inconvenient, almost always accompanied by a universal, sonorous *râle*, to which was united in some individuals towards the close of the affection, a little of the crepitant *râle*; the sole sign of an inflammation of the parenchyma of the lungs, ordinarily, but little extended.

The successive changes effected in the physiognomy were remarkable. Bloated and violaceous at the commencement of the disease in a large number of subjects, the countenance lost by degrees this character, and became, if we may so express it, without animation, succeeded by indications of prostration, stupor, or indifference; and, in some, by a profound pre-occupation or reverie, and again by furor or wandering, resembling a species of delirium. In some cases the countenance was expressive of pain; in others were observed spasmodic movements of the lips, zygomatic muscles, or those of the lower jaw, or a permanent contraction of the pupils. These spasms, sometimes, were of considerable duration, existing also in other parts of the body to such an extent, that frequently twitching of the tendons, very marked spasmodic movements of the superior extremities, and often a permanent contraction of the same parts, and of the muscles of the neck, took place. Death finally supervened, ushered in either by delirium or a deceptive calm, the patients only losing their consciousness a few hours previously. Death, however, occurred sometimes in a very unexpected manner. Very frequently it took place from secondary lesions, or was precipitated by perforations of the small intestines, which almost constantly give rise to the symptoms of intense peritonitis. Such was the progress of the disease in the greater number of cases. In others this progress presented remarkable modifications, either in the commencement, or during the course of the affection. Thus, many patients only experienced, during a space of time of some duration, a simple febrile excitement, great heat, intense thirst, little drowsiness, some vertigo, partial loss of appetite, and a moderate degree of feebleness, without pains of the abdomen, without diarrhoea, or without any symptom which indicated, in a definite manner, the seat of the disease. Some cases even, (three,) had not a looseness; and it was not until five, six, or eight days had elapsed, sometimes a little more or less, that pains of the abdomen and diarrhoea occurred in others, after which the affection pursued its accustomed course.

In some cases the fever, after having commenced with great ap-

parent vigour, diminished; the feebleness was inconsiderable, the characteristic symptoms not present, the affection appeared slight, and the patient seemed from the first attack to have rather a simple gastric derangement than any other disease. This was the latent form; of which the diagnostic indications remained uncertain even till death, or to the moment when the perforation of the intestine removed all doubts. The most usual external characters, the physiognomical changes, for example, were altered also in some cases, by the intensity of many of the symptoms. Sometimes, in fact, the diarrhœa and the tympanites; sometimes the stupor, delirium, and every species of spasmodic symptoms; and accordingly as one or the other of these states prevailed, the disease assumed the appearance of a putrid or ataxic fever; sometimes, also, it assumed the form of an inflammatory fever in patients in whom the pulse was large, and the integuments had become injected in the early stage of the disease.

In some individuals the drowsiness predominated, continuing without the slightest interruption, with a freedom from delirium, or a very little of it subsequently, and, notwithstanding the most severe lesions, the calm continued even till death.

Notwithstanding these different aspects, the affection was always the same, the fundamental disorder did not change. On dissection there was invariably found a lesion, more or less severe, of the elliptical\* plates of the small intestine, profoundly altered in proportion

\* The reader will probably understand what the author means by the elliptical plates, (plaques elliptical,) of the ilium, from the following remarks on the subject, extracted from the author's treatise on phthisis:—

“The mucous membrane of the small intestines is naturally white; its thickness a little more considerable in the jejunum than in the ilium.

“If, after having made an incision in it, we raise the edge of it with the scalpel, and seize it with the extremity of the fingers, or forceps, we can elevate the laminae of it from five to six lines in length.

“This experiment suffices to indicate the consistence of the mucous membrane in its natural state; and when we cannot obtain, in this manner, laminae of the size indicated, we must conclude, that there is a lesion of it more or less profound.

“But the uniformity of this membrane is interrupted at distances more or less considerable by oval plates, of very various dimensions. We observe them in the three last fourths, sometimes in the whole extent of the intestine. From twenty to thirty, and sometimes more of them are observed. Placed opposite to the mesentery, they are from a quarter of an inch in width to eight or ten lines in length; becoming more numerous and larger as they approach the cœcum; forming an inconsiderable elevation, sensible, nevertheless, to the sight and touch; having a thickness double, triple,

as the plates were situated proximately or remotely in relation to the ileo-cæcal valve, presenting appearances very remarkable, according to the duration of the disease, accompanied by an analogous alteration of the corresponding mesenteric glands.

The other organs, frequently, were far from being in a natural state; but their lesions were not constantly present, and only differed, slightly, from those lesions which we observe in subjects who have sunk under other acute diseases. In the chapter on diagnostic indications, the reader will be enabled to see how it is possible to avoid the errors into which a superficial observer may be drawn inadvertently, in a case where the character of the disease is widely different from that which it was wont usually to present.

The duration of the disease varied from eight to forty days, and beyond that period. The different stages were almost confounded in those individuals who sunk so early as from the eight to the twelfth day of the affection. In a certain number of cases the characteristic symptoms ceased some time before death; in these instances the disease was considerably protracted, and it was then, especially, that the fatal termination evidently resulted from some accessory lesions.

2d. *Symptoms in those who Recovered.*—Among those in whom the affection was severe, (fifty-seven,) the symptoms, except the permanent contraction of the muscles, which was wanting, were the same as in those cases which had a fatal termination, with the exception of being a little less intense. Thus, in this, as in the preceding class or fatal cases, the diarrhoea and abdominal pains, though in a rather less proportion, commenced in the greater number with the first attack of the disease, and when this was not the case they were a little more tardy in their appearance than in the analogous fatal cases. The diagnostic indications were uncertain, and its seat undetermined, during a space of time more or less considerable, in some subjects; and in others, the predomi-

or quadruple, that of the surrounding mucous membrane; they are completely opaque, of a white or grayish colour, and sometimes dotted with blue. They have not the velvet aspect of the rest of the intestine. Their surface presents a great number of grains, much smaller than those of millet, white, or a little yellowish.

“If we elevate them in the manner indicated above for the mucous membrane, we observe on their adherent surface the same granular appearance; and if we place one of these plates thus detached between the eye and the light, the interstices of the small grains appear thin and semitransparent, very similar to the mucous membrane in the rest of its extent.”



nance of certain symptoms more or less altered the habitual character of the affection, in such a manner as to give it the forms of putrid, ataxic, or inflammatory fevers. Whatever form it assumed, however, after from fifteen to fifty days from the commencement of the disease, and beyond that, according to the rapidity or tardiness of the affection, the more severe and characteristic symptoms, the drowsiness, delirium, and meteorism diminished and soon ceased entirely; the number of stools were less considerable; the thirst was less intense; the tongue freed itself from its more or less brownish crust, with which it was frequently covered; the pultaceous plates which it presented in some cases ceased to be reproduced, and it approached more or less to its natural state; the physiognomy became more natural; the patients began to be interested with things around them, demanded food, appearing as it were to be re-entering life, a kind of resurrection extremely remarkable in some cases in which the convalescence had been very rapid; the heat diminished; the pulse less accelerated; and, in fine, all the functions gradually returned to their natural state.

Some of the functions, however, were re-established much more slowly than others, in many individuals, and their convalescence was accordingly retarded; the heat was more or less intense, the pulse continued more or less accelerated, and the looseness remained without its being ascribable to any errors in diet. A small number of patients, during convalescence, had copious and universal sweats during the night, while the other functions, on the contrary, and particularly digestion, were in a natural state. These sweats resisted equally tonics or stimulants, the infusion of cinchona and the infusion of mint, and disappeared very slowly, only, after ten or fifteen days duration.

The blistered surfaces and the ulcers which succeeded to the eschars of the sacrum, cicatrized slowly in some cases, and formed a new obstacle to the complete re-establishment of the organic forces.

The heat, the acceleration of the pulse, and the diarrhœa displayed the most obstinacy generally in those patients whose symptoms were most severe, and longest continued, which is readily to be accounted for; the severity of the symptoms indicating that of the lesions, and these disappeared more slowly in proportion to their magnitude and severity.

The emaciation, which in some cases was considerable, disappeared proportionately slower, when the digestive functions were only partially re-established at the commencement of convalescence, which occurred from the eighteenth to the eightieth day and beyond

that.\* This extreme difference depended in some subjects, as has already been observed, less on the development of some secondary lesions, more or less severe, in the course of the affection, than on the extreme slowness of its progress in the first period.

In those cases in which the affection was slight, the diarrhœa was not so protracted nor severe, the cerebral symptoms less frequent, less violent, and of shorter duration than in the others, and the same remarks were alike applicable to the state of tympanites.

The mean duration of the disease, however, was not very variable. It was twenty-eight and one-third days in those cases which proved fatal, and thirty-two days in those which recovered. What indicated sufficiently that the affection was developed extremely slowly in some cases, was the circumstance that during three, four, and more weeks, which preceded the entrance of a certain number of patients into the hospital, subsequent to their being attacked with the disease, they only experienced slight symptoms, such as mild diarrhœa and a moderate diminution of the strength and appetite. These symptoms continued also, in the same manner, for some time after their admission, to which were subsequently superadded a slight state of tympanites, delirium, drowsiness, reddish lenticular spots or sudamina, which indicated decidedly the true cause of the first or accidental symptoms, which it was impossible to have associated with any other lesion than that of the elliptical plates of the ileum.

The spasmodic rigidity of the limbs and of the pupils did not take place, as has been already noticed, in any of the cases which had a happy termination. The pulse was generally less accelerated and larger in these cases than in the others. The medium age of those patients who recovered was twenty-one years, that of those who died twenty-three years. The medium period of the residence of the first at Paris, was fourteen months, of the second eleven months. Thus it would appear that the prognosis of the typhus affection ought to be less discouraging, generally, in subjects very young; in those in whom the pulse was moderately accelerated and large, and in those who had resided at Paris for more than a year, than in those under contrary circumstances. It should always be remembered, nevertheless, that typhus fever, however benign its appearance may seem, is always a formidable disease; in regard to which we should ever apprehend danger, even in cases where the symptoms are very light, as well as those in which they are severe; for we know not at what mo-

\* The period of convalescence the author dates from the time when the patients began to desire and eat a little bread.

ment perforation of the ileum may take place. The prognosis ought, therefore, never to be pronounced, positively, favourable in this disease, in respect to the fate of which we cannot be certainly assured until convalescence has assumed a decided character.

After this general, but summary history of the disease, the author enters into all the circumstances connected with each symptom, and endeavours especially to determine with precision the period of its commencement, its duration, its intensity, its connexion with the lesions which correspond with it in those cases which terminated fatally, its existence or non-existence in other acute diseases, not typhus, and its relative character in the latter, both as respects cases which have proved fatal and those which have recovered.

The several symptoms thus treated of individually, and at large, are—

1st. Diarrhœa. 2d. Pains of the abdomen. 3d. Meteorism. 4th. Gastric symptoms. 5th. State of the tongue, mouth, and fauces. 6th. Deglutition. 7th Cerebral symptoms; *a.* cephalalgia; *b.* somnolency; *c.* delirium; *d.* spasms; *e.* state of the powers of the system; *f.* pains and œdema of the limbs. 8th. Symptoms furnished by the organs of the senses; *a.* epistaxis; *b.* state of the eyes; *c.* of the ears; *a.* deafness; *c.* tinnitus aurium; *γ.* pains; *δ.* inflammation of the external meatus. 9th. Of the skin; *a.* lenticular rose-coloured spots; *b.* sudamina; *c.* erysipelas; *d.* various eruptions. 10th. Of the febrile symptoms properly so called; *a.* chills; *b.* heats and sweats; *c.* pulse. 11th. Respiration. 12th. Of the symptoms connected with the intermittent form of the disease. 13th. Of the state of the blood drawn from the veins during life.

To this important part of the work, illustrated and confirmed by the recital of several highly interesting cases, the author has appropriated about three hundred pages.

In order that the reader may form a correct idea of the precise, elaborate, and ample manner in which this part of the work has been executed, we shall present in full the author's observations under the head of *Diarrhœa*.

"I. *In subjects who died of the typhus affection*.—This symptom was only wanting in three cases. It varied in the others relatively, to its commencement, its degree, the nature of the excretions, and its seat, which was sometimes more or less extensive.

"1st. *Of its commencement*.—In forty subjects, of whom the author was enabled to obtain precise information relative to this point, twenty-two had stools more or less numerous and liquid from the first day of the disease. In fifteen other subjects, the diarrhœa appeared in nine from the third to the ninth day of the affection, and in six from the eleventh to the fourteenth. From the com-



commencement of the disease up to these respective period, the stools had been either regular or costive, and ordinarily solicited by injections.

"The three subjects who were exempt from diarrhœa, died on the thirteenth and fourteenth days of the disease, which would lead us to conclude, that the presence of diarrhœa was not the principal cause of the more or less prompt fatal termination of the affection, in those cases in which it had prevailed.

"The same inference was deducible also from the proportion of the cases in which the diarrhœa commenced on the first day of the affection, compared with other cases, when arranged in accordance with the principal groups of subjects. These cases were distributed in the following order:—Three out of eight subjects of the first series—one out of four of the second series—eleven out of twenty of the third series—seven out of nine of the fourth series.\*

"It is proper also to remark, that among the subjects who died from the twentieth to the thirtieth day of the disease, four laboured under diarrhœa, for twelve, forty days, and five months previously to the commencement of the typhus affection, and it was not deemed proper to revert to the consideration of this epoch in describing the development of the disease, because there was no other indication of the typhus affection present, and the elliptical plates of the ileum did not at the time of death exhibit any of the characters, which they ought to have presented, very probably at least, had the diarrhœa been the effect of their alteration at its commencement.

"2d. *Of the degree.*—The diarrhœa was excessive, moderate or slight, varying according to circumstances. Excessive in eighteen out of thirty-two subjects, in which its degree was ascertained with exactness, who had from eight to ten stools or more daily: moderate in seven who went to the chamber from four to six times in the twenty-four hours: slight in an equal number who had only one or two alvine evacuations during the day, rarely more.

The cases of excessive diarrhœa were distributed in the following manner:—One out of three subjects of the first series—one out of two of the second series—eleven out of eighteen of the third series—five out of nine of the fourth series. So that if the commencement of the diarrhœa coincided with that of the affection, more frequently in subjects who died after the twentieth day, than in those who succumbed before this period, its degree was also more considerable frequently, in the first, than in the second.

"Whether the diarrhœa was excessive or slight, and commenced or not with the commencement of the disease, it did not pursue its course always in the same degree; but presented, in a certain number of cases, variations in its progress.

"In seventeen cases it was almost uniform, or augmented successively, and became finally stationary. In seven out of the other fifteen cases, it diminished in the second part of its duration, or in the seven or eight last days of the affection. In four patients, on the contrary, it augmented considerably in the last

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\* "The above arrangement or classification of cases is founded upon the following principle. The subjects of the first series died from the eighth to the fifteenth day of the disease; those of the second from the fifteenth to the twentieth; those of the third from the twentieth to the thirtieth; and those of the fourth beyond the last named period."

stage of the disease. In the four last cases its progress presented nothing decisive; it was incessantly varying.

“3d. *Of the nature of the evacuations.*—The fæcal matters, ordinarily very thin, formed with the urine a more or less turbid liquid, at the bottom of which could be discovered a number of small yellow particles; *rarely*, some portions more or less solid, in the cases where death did not take place, subsequent to the thirtieth day of the disease. In place of the yellow colour, which was the most ordinary, the fæcal matters, occasionally, had a brownish tint, similar to that of the grounds of coffee, of which it presented the consistence in two subjects, who died on the twenty-third and twenty-ninth days of the affection, (cases 24 and 29.) Two others, passed for a short time, a quantity more or less considerable, of pure blood.”

And although the author examined, in a very large majority of the cases, which examinations were frequently repeated in each case, the alvine evacuations, he did not find in them the least mucus, except in four individuals. This doubtless, does not surprise us much, when we recollect how very rare it is to meet with mucus in the large intestines, in post mortem examinations.

“The cases where the fæcal matters were mixed with pure blood, and those where they had the aspect and consistency of the grounds of coffee, are deserving of attention in this respect, that evacuations of this nature scarcely ever take place in the course of acute diseases, distinct from the typhus affection, and that, in doubtful cases, they constitute an important diagnostic indication.

“The lesions of both the large and small intestines did not present, besides, any thing remarkable in these four cases, from many others where the fæcal matters exhibited nothing extraordinary.

“4th. *The relation of the diarrhœa with the state of the intestine.*—This relation was not always the same, because the alteration of the mucous membrane of the intestine extended itself more or less rapidly from the period of attack. At this epoch, in fact, the elliptical plates of the ileum, if not in all, at least in almost all the cases, were the only parts of the intestinal canal affected, and consequently the only parts to which could be attributed the looseness. And although, at a period more or less remote from the commencement of the affection, the mucous membrane, intermediate to the plates, and that of the colon, were, ordinarily, more or less altered; yet they were not constantly; so that the diarrhœa, sometimes, had a double seat, the large and the small intestines; sometimes one seat only, the small intestines. This last was the case in eleven subjects, in whom the mucous membrane of the colon possessed a proper consistence, and was almost perfectly sound; although among them four were found, in whom the diarrhœa had been considerable from the commencement of the disease: whence it followed that the duration and intensity of the diarrhœa did not indicate, with certainty, a lesion of the mucous membrane of the large intestine. And, independently of the cases in which there were at times, pains in the transverse direction of the colon, from tenesmus, or extremely frequent stools, it could not be affirmed, that the diarrhœa had its seat, not exclusively, but even in a part of the large intestine. The different periods of the

augmentation and diminution of the number of the alvine evacuations, afforded no additional light on this point; the stools were sometimes more, sometimes less frequent in the last stage of the affection, than at an anterior period, when the mucous membrane of the colon might be either altered, or in a sound condition.

“II. *In subjects attacked with the typhus affection who recovered.*—These were eighty-eight in number, fifty-seven of whom were severe, and thirty-one mild cases.

“1st. Of fifty-seven patients who laboured under symptoms, more or less severe, twenty-four had diarrhœa from the commencement of the disease; a proportion rather less than in those of whom we have just treated. Of the other thirty-three cases, the diarrhœa appeared in five on the second day, in three on the third day, and in four on the fourth day, &c. &c. &c. In two cases it appeared much later, on the eighteenth and thirtieth days of the disease. One of these cases, during twenty-five days, experienced only a slight diminution of appetite and strength.

“The greater number, those in which the symptoms were mild, experienced, ordinarily, only slight pains of the limbs; an aversion more or less marked to labour; a diminution of appetite; and a slight fever; in such a manner that the persons attacked thought, in this first stage, that they only laboured under the effects of excessive fatigue. And may it not with propriety be asked, whether these symptoms of weakness, which also prevailed during a certain time in some of those patients who died, indicated the commencement of the typhus affection; the commencement of the alteration of the elliptical plates of the small intestine; or whether they were independent, and could not be arranged among the symptoms, but only regarded as precursory indications.”

Without investigating this question profoundly, which is referred to again under the head of *latent* typhus, the author remarks, “that the tardy appearance of the diarrhœa ought not to be a reason for removing the case from the typhus class, since three of the typhus patients who died, had no diarrhœa. In the cases, however, where there was neither diarrhœa nor pains of the abdomen, the other symptoms were even more in accordance with the presence of the alteration of the elliptical plates of the ileum, than with any other affection. And this is an additional reason to admit the existence of this alteration at this epoch. It may be further observed, that it is not possible to associate the symptoms which preceded the pains of the abdomen, and the diarrhœa, with those which anticipate the acute eruptions of the skin, the course of which is uniform; and that, without denying the existence of precursory symptoms, it is correct, nevertheless, to say that they are rare. We cannot, then, reject these milder and more tardy indications, since the symptoms, characteristic of peripneumony, erysipelas, and some other affections easy to be recognised at their commencement, are preceded for fifteen, twenty-four, and sometimes more hours, in some patients by general symptoms, which become subsequently more fully and definitely developed.

“2d. Considered in its progress and degree, the diarrhœa presented many varieties. Ordinarily, inconsiderable at its commencement, it increased very soon after, in a large number of cases, preserving the same character for a certain time, diminishing, in fine, gradually, and sometimes in an abrupt manner. It



was generally protracted, continuing in some patients forty and fifty days, and beyond that; this duration it was impossible to ascribe to the cinchona, which had not been administered in some cases, nor to errors in diet, or misconduct in many others. The diarrhœa had, in a majority of the cases, a relative proportion between its duration and intensity.

"It was excessive, feeble, or intermediate, in the following manner; excessive in fourteen subjects, who had from eight to twenty stools in the day, during one or two weeks; some of them more than that number, at, or a little after the commencement of the affection: feeble in twenty-two cases, where they had from two to four stools in the twenty-four hours: moderate in the twenty-one others; and in these two last groups it was of less duration than in the first. Its mean duration in all the cases collectively, was twenty-six days; thirty-three days in those cases where it had been excessive, during a lapse of time more or less considerable; twenty-six days in those cases in which it had existed in a moderate degree; and twenty-one days in those where it had been feeble. Doubtless its duration was in proportion to the lesions of the intestines, and, consequently, as the mild or excessive state of the diarrhœa prevailed; so would a longer or shorter time be required for the reparation of the intestine, in proportion to the depth and extent, or superficial and circumscribed state of the lesions.

"3d. The character of the evacuations did not differ sensibly from those which have been noticed in the cases which terminated fatally. Almost always deprived of *mucosities*, the stools presented a considerable quantity of blood, three, four, and six days in succession, in three subjects, one of which had very little diarrhœa. The blood was in clots in two cases; the stools extremely fetid, blackish, pultaceous, as if formed of putrid blood, the two last days of the hæmorrhage in that case where it had continued six days; the case of a young girl of eighteen years of age, of a strong constitution, who had the most severe symptoms, the most intense meteorism, and in whom the menses had not suffered any derangement before the disease in question. These three subjects had, besides, suffered from epistaxis, which had been considerable in one of them; which indicated a disposition more obnoxious to hæmorrhage, which it was impossible not to admit, considering the small number of cases in which the alvine evacuations presented the hæmorrhagic character.

"The sanguineous exhalation commenced at an advanced period of the disease; that is to say, at the seventeenth, twenty-sixth, and thirty-second days of the disease, which had on the whole progressed slowly, and appeared at first not severe. As to the thirty-one subjects in whom the disease was light, the diarrhœa was altogether much less intense and much less protracted than in those of whom we have just spoken, so that it was only considerable in four cases, and its mean duration did not exceed fifteen days. It commenced, also, a little less frequently with the affection, or in about a third of the individuals, (twelve,) and it was wanting in two patients: one patient alone had stools a little bloody, so that the duration and intensity of the diarrhœa were in proportion to the violence of the affection.

"III. *In subjects who died of other acute diseases.*—The mucous membrane of both the large and small intestines did not present alteration in all the subjects of this class;" from which the author concludes, in the second part of this work,

"that this alteration was accessory or consecutive to the commencement of the principal disease. This, which the morbid anatomy of the affection indicated, the symptoms confirmed; and the commencement of the diarrhœa, allowed, in the majority of the cases, to fix with precision that of the lesion of the mucous membrane. It occurred in twenty-three out of thirty-five peripneumonic cases, was proportionally less frequent in those who died before the eleventh day of the disease, than in those who succumbed after this period; manifesting itself more or less remotely from the commencement of the principal affection, from two to twelve days before the fatal termination; it was ordinarily continued, sometimes transient, generally in proportion to the alteration of the mucous membrane of the large or small intestine, or to that of the colon, which was exclusively affected in some cases. It was much less frequent, much less excessive at the commencement, than some days before death, and it only occurred in half the subjects carried off by other acute diseases, generally less inflammatory than peripneumonia. This accords with what we have seen on the subject of lesions of the mucous membrane of the intestines; lesions more frequent and more severe in peripneumonic cases, than in those who have succumbed from other affections, among which will be found apoplexies, softenings of the brain, in which diarrhœa was very rare.

"Besides, here, as in the course of the typhus affection, the diarrhœa occurred in some cases, (five,) where the mucous membrane of the small intestine was alone altered. It was absent in some of those where the mucous membrane of both intestines was softened.

"IV. *In subjects attacked with acute affections, not typhus, who recovered.*—"Of fifty-eight patients affected with peripneumonia in different degrees, twenty-one, or about a third part, had diarrhœa. It was rarely considerable; from five to six days duration, sometimes more, sometimes less; commencing in the majority of cases, from the fifth to the eighth day of the disease, rarely sooner or later. It occurred the first day of the disease, in three individuals, who drank to excess of wine, the same day.

"Fifteen of the forty-six subjects attacked with *eruptive diseases*, (small-pox, scarlatina, measles, almost equal in number,) had diarrhœa, and its frequency was almost the same in these three species of affections. Less considerable and less protracted, with scarcely three exceptions, it commenced from the fourth to the sixth day of the disease, in the most part of the cases; frequently, nevertheless, on the first, (five times,) which indicates a particular tendency of the mucous membranes to alter in the course of these affections; a tendency which is indicated manifestly besides, by the state of the fauces in scarlatina especially.

"The fourth part of the subjects who had erysipelas of the face, (ten out of thirty-eight,) laboured under diarrhœa. Ordinarily mild, continuing from three to ten days, it commenced from the fourth to the eleventh day of the disease. The treatment nevertheless had probably some part in the production of the diarrhœa, in six cases where it succeeded the exhibition of mild purges.

"We observe *some part*, considering that almost all the patients had at a certain epoch of the affection taken gentle cathartics; which had not been followed by diarrhœa, except in the six cases indicated, and consequently an exciting action alone, could be attributed to the purgatives at the time, which must

have met in the subjects on which they acted, with a predisposition, which would have been sufficient, in a short time, without their concurrence, to have caused the diarrhœa.

“Of thirty-nine patients affected with angina gutturalis, (cynanche pharyngea,) more or less intense, four had a looseness, somewhat considerable in three of them. It occurred at the commencement of the disease in one case; on the third day in another; on the seventh in the two last, persisting from eight to twelve days. It did not in any case follow purgatives, which were almost always administered: and this fact comes in support of what has been already said on the little influence which was to be ascribed to purgatives, in the diarrhœa of patients attacked with erysipelas of the face. It is also perfectly in accordance with what was observed in the first part of this work; that the secondary lesions were in proportion to the febrile action, which is generally more feeble in angina than in erysipelas.

“Of fifty-seven cases of acute rheumatism, diarrhœa occurred in eight. It commenced on the second day of the affection in one subject; very considerably later in the others, from the eleventh to the fortieth day; continuing five, fourteen, and thirty days; was excessive in two cases; especially in that which evinced the most obstinacy.

“The diarrhœa was rather less frequent in patients attacked with pulmonary catarrh. In seventy-two cases the eighth or ninth part were affected. It was moderate in every case, so much so, that no patient had in the course of the day more than three or four stools. It commenced from the fifth to the eighth day of the disease, rarely later, and continued from one to three weeks.

“In twenty cases of urticaria, (fièvre orticees,) zona circinatis, or erythema marginatum, one only of the last afforded a case of diarrhœa, which commenced on the fourteenth day of the disease, and continued fifteen days.

“In five, two subjects, out of twenty-six who were attacked with idiopathic jaundice, (*ictère essentiel*,) had diarrhœa either from, or five days after the commencement of the affection. And what is worthy of remark, it was not excited into action, in any case, by purgatives, which had been administered once and oftener in almost every case; which affords an additional proof in support of what was said in respect to erysipelas and cynanche pharyngea, in relation to the necessity of admitting a predisposition to diarrhœa, in those cases where mild purgatives produced a looseness of longer or shorter duration; and the absence of this predisposition in those cases in which there was little or no fever.

“Should these facts appear insufficient to establish this double proposition, at least the last, it is placed beyond all doubt, by what occurs in patients attacked with colica pictonum, to whom we administer emetico-cathartic and drastic purgatives, without their action being extended beyond the day or that following their exhibition. At least, of seventy patients treated by this method at La Charité, one only suffered a slight super-purgation of some days duration.

“If we now return from the consideration of the diarrhœa, to the cause which produced it, we must conclude, from the preceding observations that the mucous membrane of the intestines was frequently altered, to a greater or less extent and depth, in the course of all acute diseases, more or less febrile,



which have terminated favourably; that between these cases, and those which terminated fatally, the difference consisted only in the degree and frequency of the lesions, both being in proportion to the violence of the febrile excitement; and that this law of sympathy, which the study of the varying state of the intestines has indicated to us, is alike applicable to cases which succumb, as to those which recover."

We offer no apology for presenting in detail the entire observations of the author on the individual symptom of diarrhœa. Independently of the valuable facts and observations exhibited, it was the only plan which we could with propriety adopt, to enable our readers to estimate correctly the elaborate, critical, and ample manner in which this part of the work has been executed. Throughout the whole of the researches on the various symptoms, there appears to us, an indefatigability of investigation, a niceness of discrimination, a faithfulness of delineation, and an exactness of deduction which cannot be too much admired nor too closely imitated.

The anatomical character of the disease, under which we embrace the various lesions of structure, is treated in a like able manner with the preceding.

This part comprehends a description of all the lesions of the viscera; in the first place in those who died of the particular disease under consideration, and secondly, in those who have been carried off by other acute diseases; and, at the close of each description, the author endeavours to ascertain the causes; the character of the lesion described; and the period of its development. Although he has introduced into this work the histories of fifty patients who died of the typhus affection, yet he rests the general description of the symptoms, and the anatomical character, upon forty-six fatal cases, in which there could be no doubt of the identity of the disease. Of these forty-six, ten died from the eighth to the fifteenth day of the disease; seven from the sixteenth to the twentieth day; twenty from the twentieth to the thirtieth; and nine beyond this period.

By regarding the subject in this general and comparative point of view, the author has been enabled to ascertain, with considerable accuracy, the lesions which were essential to the disease under consideration; those which were merely incidental; and those which were only accessory or secondary in their appearance.

To the consideration of this part the author has appropriated about three hundred pages, and it is decidedly the most interesting part of the treatise.

After having considered, at large, very fully and minutely, the le-

sions of each respective organ of the system, and entered into all the details necessary to a profound knowledge of the facts, the author presents us, in a very condensed manner, with a summary view of this part. The facts thus summarily arranged, are presented under the head of each respective organ.

“1st. *The pharynx* presented one or more lesions in a sixth part of the cases: false membranes; a purulent infiltration into the cellular sub-mucous tissue; but, more commonly, ulcerations.

“2d. *The œsophagus* presented a single species of alteration, only; that of ulceration; which was found in a rather smaller number of subjects than the affections of the pharynx. The ulcerations were sometimes few, sometimes numerous; and almost always inconsiderable in size.

“3d. *The stomach* was rarely augmented in size. Its mucous coat was in a natural state in thirteen subjects; softened and thinned in bands, or in a continued manner in nine; ulcerated in four; more or less mamilloid or softened in different degrees, and in a variable extent, with or without alteration of colour in the others.

“4th. *The small intestine* was meteorised, (tympanitic,) in fourteen cases; to a remarkable degree in two only; and it exhibited invaginations of the superior, into the inferior portion in three subjects. Its mucous membrane, distinct from the elliptical plates, was white in rather less than one-third of the individuals; red, varying in extent of length in seventeen; grayish in eleven; of a proper consistence in its entire extent in one-fifth of the cases; and softened in extent and degree, more or less considerable, in the others. There were solitary cryptæ, more or less developed, near the cæcum in one-fourth of the subjects. In all the *elliptical plates* were more or less altered, and this alteration was greater, and more profound, in proportion to their proximity to the cæcum; near to which the perforations of the intestine, when present, were found to exist. The corresponding cellular tissue was also constantly altered, in such a manner, that it was impossible to decide rigorously, whether the lesion commenced in this tissue, or in the mucous membrane; or whether these two membranes were invaded at the same time.

“5th. *The large intestines* were tympanitic, in more than half of the cases, ordinarily to a remarkable degree; their parietes, at the same time, retaining the thickness which was natural to them, or acquiring additional thickness, as we observe in the small intestines when distended by fecal matters, in a state of strangulation. The mucous membrane was white in thirteen subjects; red, in a variable extent, in twenty; grayish in nine; of a natural consistence in one-fourth of the cases; softened, in a greater or less degree, to an extent more or less considerable, and sometimes thickened in others.

“Eight subjects presented a greater or less number of the lenticular cryptæ, seldom ulcerated; in four the plates were hard, small, roundish; in others similar to those of the ileum; in fourteen the ulcerations, ordinarily not numerous, were superficial, and of small extent.

“6th. *The lymphatic glands* were frequently far from being in a natural state. Those of the mesentery, which corresponded to the elliptical plates of the ileum, more or less altered, were red, thickened, softened, &c. &c. in every

case, and this triple alteration presented varieties, more or less remarkable, at different periods of the disease.

“The mesenteric glands, which corresponded to the sound elliptical plates, presented, in one-fourth of the cases, even the same alteration, but in a considerable less degree. The mesocolic glands were also the seat of analogous lesions, ordinarily severe, but not so in every case. The cervical glands, and those of the great and small curve of the stomach, were sometimes red and thickened to the same degree as the mesenteric glands, which corresponded to the healthy plates. The lymphatic ganglions surrounding the biliary ducts, were, in two cases, violently inflamed.

“7th. *The spleen* in all, with scarcely four exceptions, was profoundly altered; ordinarily thickened and softened; very frequently quadruple or quintuple in size, and then, constantly, very considerably softened.

“8th. *The liver*, in some rare instances, was a little more enlarged, or diminished in size, than in its ordinary state. It was softened in one-half of the cases; to a remarkable degree in some, and then ordinarily it was of a pale colour, containing little blood, and presenting, when incisions were made on its surface, a dry aspect.

“*The bile* was very abundant, very liquid, reddish or greenish in a majority of cases, and sometimes turbid.

“*The gall-bladder* in three subjects contained true pus, and its mucous coat was more or less red and thick in the same cases.

“9th. *The kidneys* were softened and enlarged in some individuals, evidently inflamed in one of them; ordinarily, however, healthy. The internal lining membrane of the pelvis of the kidney was more or less red and thickened in two cases; that of the bladder in two others; and in a third it presented a small ulceration near the meatus urinarius.

“10th. The parotid glands were not inflamed, except in one case.

“11th. *The heart* was sound in rather more than half of the cases; more or less softened in others; and sometimes to an extreme degree. In these cases it was of a lived red; its parietes thin, capable of being very easily torn; and its cavities contained only some drops of blood mixed with air, or else this fluid was serous, not fibrous. The reverse of this prevailed in those cases in which the heart was sound.

“*The aorta* was of a red colour, more or less bright, in almost all the cases where the heart was soft; and sometimes in these cases its internal membrane was softer and thicker than ordinary. This red discoloration was rare in those cases where the heart was sound, and when it did occur was very slight.

“12th. *The epiglottis* was red, enlarged in every direction, and was covered by a false membrane in two cases; it presented with the same thickening a partial destruction, little extended, at its summit, or laterally, in one-sixth of the cases.

“13th. *The larynx*, in three cases, was covered by a false membrane; it was affected by a small ulceration in a fourth.

“14th. *The lungs*, in a third of the cases, were in a natural state, or nearly approaching to it; spleenized or hepatized in the others to an extent ordinarily not very considerable. These two lesions existed isolated or simultaneously.



"15th. *The pleuræ*, in rather less than half the cases, contained from three to thirty ounces of bloody serum.

"16th. *The arachnoid* was covered, to a moderate extent, at the superior part of the brain, by a false membrane, extremely soft in two subjects. *The cortical substance* of the brain was more or less rose-coloured or red, in seventeen cases; its *medullary substance*, in most of the cases, was injected, ordinarily to a moderate degree; both, in seven subjects, were a little softened. In two others there was a partial softening, inconsiderable, bordering on the septum lucidum, or approaching to one of the thalami optici.

"*The cerebellum*, in a smaller number of instances, presented the same lesions as the brain.

17th. *The skin*, in fine, presented deep traces of phlegmonous erysipelas in four patients; it was thickened or thinned, partially ulcerated or completely destroyed, in those places where blisters had been applied. Its destruction, in a considerable number of patients, was also complete. Apart from the erysipelatous state, the sub-cutaneous cellular tissue did not, except in two cases, present any alteration; one of which was an abscess beneath the inferior maxilla, and an emphysema of the neck."

These various lesions, which were found conjoined in a greater or less number in every case, were not all of the same nature; could not all be referred to the same cause; were not equally frequent in patients who died at different periods of the disease; nor were they developed at the same epochs of the affection.

Relative to their character, some were the result of inflammation, more or less direct; others appeared to be independent of inflammation. To the first class may be referred the false membranes of the pharynx and trachea; the infiltration of pus into the sub-mucous cellular tissue of the pharynx; the ulcerations of this organ; those of the œsophagus and stomach; the mamilloid state of the mucous membrane of this viscus, its softening, its softening with thinning; the alteration, more or less profound, of the elliptical plates of the ileum; that of the corresponding mesenteric glands; the softening of the internal membrane of the large intestines in many subjects; its hardened plates, its ulcerations; the swelling and the softening of the mesocolic glands; the redness united with thickening of the mucous coat of the gall-bladder; the thickness and redness of the pelves of the kidneys; the softening of the kidneys themselves in one case; the partial destruction of the epiglottis; the hepatization of the lungs; the false membrane of the arachnoid; in fine, the erysipelas, the eschars of the sacrum, the ulceration or the thickening of the skin in those parts where blisters had been applied.

The second class, or those lesions independent of inflammation, were the pale softening of the liver and the heart; the redness of the aorta, evident at least in the greater number of the cases; the soften-

ing of the mucous membrane of the stomach, and of the large and small intestines, in a certain number of subjects; the spleenization of the lungs; the effusion of bloody serum into the pleuræ; the different states of the spleen; the general softening of the brain; and the more or less rose or red colour of the cortical substance of this viscus.

Some of these lesions, the ulcerations of the pharynx, of the œsophagus, and of the epiglottis, were not observed in those patients who died from the eighth to the fifteenth day of the disease; but were more frequently noticed in those who died from the sixteenth to the thirtieth day, than among those who were carried off after this period. The other lesions were also, generally, less marked in this last period than in the others, the first especially. From the fact, that certain lesions were less obvious and less frequent in patients who died after the thirtieth day of the affection, than in those who died sooner, the author asks whether this difference was owing to these lesions having always been in a more moderate degree in these protracted cases, or whether they had retrograded towards a healthy state. This question he considers the more natural, as the alteration of the elliptical plates of the ileum, and that of the mesenteric glands, had evidently followed a retrograde course in a great number of patients. Although this retrograde course he regards as very probable in a certain number of cases, yet many facts he considers do not depose any thing in its favour. For if this retrograde march, if we may say so, had an existence, and the difference of proportion which is at present under consideration should be ascribed to it, this difference ought to amount to nothing in those lesions which leave deep traces, such as the ulcerations of the pharynx and the œsophagus, the partial destruction of the epiglottis, and the softening with thinning of the mucous membrane of the stomach, and yet in these very lesions the difference was great. Besides, had these lesions been the same in all the cases, how can we conceive that death should occur after the lapse of a short period in some cases, and not until after a considerable time in others, did there not exist in these two classes of cases an extreme difference in the morbid condition of the ileum.

“It is nevertheless, to say the least, impossible to admit, that the secondary lesions are not of any importance; nor will it avail to admit that they existed in the different groups of subjects in the same proportion; but that their presence was more or less marked by different degrees of severity. This last view, however, can only be regarded as a supposition, and therefore unworthy of arresting our attention.

“The most conclusive reasons in favour of the retrogradation of the lesions from their morbid towards a healthy state, in a certain number of the cases, were, in the first place, that this retrogradation applied to the elliptical plates of the

ileum and the mesenteric glands; and secondly, that the grayish colour of the mucous membrane of the alimentary canal was not observed in subjects who were carried off from the eighth to the twentieth day of the affection, but almost uniformly in those who died after the twenty-fifth day; and that this colour is one of those changes which the inflamed membrane experiences in passing to its natural state."

Of all the various lesions observed, one alone was constantly present in all the cases of the typhus affection—the alteration of the elliptical plates of the ileum; to which might be added the alteration of the mesenteric glands.

The alteration of the elliptical plates, the author regards, as inseparable from the main disease under consideration, and as constituting its anatomical characteristic. As this lesion, however, was more or less profound in some patients who died on the eighth day of the disease, and, as in much the greater number, the first symptoms indicated a lesion of the intestinal canal, and as the alterations of the ileum were more profound than those of the colon, which was healthy, in a considerable number of cases; the author concludes, that the alteration of the plates of the ileum had its origin, simultaneously, with the commencement of the disease.

"Notwithstanding," says M. Louis, "the other lesions could be regarded as accessory only, or consecutive; they commenced, nevertheless, very frequently at a very early period; since many of them, the different softenings especially, were more profound in subjects who were carried off, from the eighth to the fifteenth day of the disease, than in those who died at a more advanced stage of the affection.

"The anatomical character of the typhus affection becomes still more evident by comparing the various lesions which have been considered, with those which individuals present who have died of other acute diseases; for if we except from these lesions those of the elliptical plates of the ileum, the ulcerations of the pharynx, the œsophagus, and the epiglottis, which were only present in the typhus affection, the lesions were the same. There was no difference, except in the proportion of the cases in which they were met with, and that only in respect to some of the organs; since, in regard to the other organs, the mucogastric membrane for example, this proportion did not differ sensibly. The mucous membrane of the stomach was in a natural state more frequently, even, in the course of this disease, than it was in subjects who had died of other acute affections. And, as we cannot with logical niceness, or even propriety, denominate an ordinary peripneumonic affection, a gastro-peripneumony, because we frequently find an alteration more or less profound of the mucous membrane of the stomach upon post mortem examinations of patients who have sunk under an inflammation of the parenchyma of the lungs; neither can we, with more propriety or consistency, designate the typhus affection, a *gastro-enteritis*."

These lesions of the mucous membrane of the digestive passages,



however, and those of a number of the other organs in patients who have died of acute affections, of whatever nature the lesions may be, prove, that whenever they give rise to a febrile excitement of some duration, the greater part of the viscera become very soon the seat of lesions more or less profound, the digestive mucous membrane not more, and even less frequently, than some others, the spleen for example, which, with the exception of four patients, was altered more or less in every case of the typhus affection. These facts the author regards as indicative of an important law of the animal economy, which he thinks can, if he is not greatly mistaken, simplify greatly, the study of pathology; and which would, perhaps, ere long, have been discovered *à priori*; "for what cause," he asks, "apparently, is more capable of producing all kinds of diseases and lesions, than a febrile excitement, more or less violent, and sometimes of long duration?"

The ulcerations of the pharynx and the œsophagus only occurred in a small number of typhus patients, and not in any other case; and ought, therefore, to be regarded, in some measure, as characteristic; only *secondary* however; but important nevertheless; inasmuch as some ulcerations of the pharynx or œsophagus sufficed, in a patient who had died of an acute disease, to indicate, with a certainty almost absolute, the nature of the affection. The same remarks apply very nearly to the partial destruction of the epiglottis. The ulcerations of the large intestine had also something peculiar and characteristic to the typhus affection; they occurred much more rarely in the course of other acute diseases, which only afforded three examples. These cases apart, and a fourth relative to a small ulceration of the larynx in a peripneumonic patient, the author only met with ulcerations in subjects who had died of acute diseases, in those individuals who had sunk under the affection which constitutes the special object of these researches. The author, therefore, concludes, from these and other facts, that the typhus is distinct from other acute affections; not only as regards its seat, and the character of its lesions, but also from a disposition, profoundly impressed on the membranous tissues, which inclines them to take on ulceration. "That, in fact, under this relation, *the typhus is to other acute diseases, what phthisis is to other chronic affections.*"

The alterations of the spleen had also something peculiar to the typhus affection, since these lesions occurred in all those who died, with the exception of four cases, and without exception, in all those who sunk from the eighth to the fifteenth day; while they were much less frequent in the course of other affections, in which they were

not observed to attain the maximum of development which they present in many fevers.

After the recitation of these facts, the author asks—

“What are we to think of the doctrine of derivation and of revulsion, or of the possibility of destroying one inflammation by another, at a period more or less remote from the commencement of the disease?” For he observes, “we do not speak here of simple pains which can frequently be removed by the excitation of a new pain; but what are we to think of the truth of this doctrine, when it is a law of our economy, that an inflammation produces a number of secondary lesions, and ordinarily a new inflammation.

“Doubtless it only becomes us to make observations, to remove uncertainties, and to trust to time to furnish facts capable of conciliating facts apparently contradictory, and finally to submit to the dictates of experience. Has experience, however, really spoken? Where are the facts which prove in an unexceptional manner, the utility of derivatives and revulsives in those cases in which they have been employed? Have we not taken for effects, simple coincidences? And does it not seem that if the representation of the lesions which we have described does not suffice to overturn the doctrine of derivation, it ought, at least, to excite doubts in the more intelligent, as to the utility of the precepts upon which it is based, and at the same time the desire of seeing this doctrine sustained, or overturned, or modified by new facts.”

Having presented this summary view of the anatomical character of the disease, we will notice in like manner the author's observations on the proximate *cause of death*.

“It probably,” he says, “never occurs that individuals who die of a disease, the seat of which is precisely determined, only present lesions in the organ primitively affected; at least we have never met with an instance. But in the greater number of cases, the derangement of the primitive organ is so considerable, that death may be readily accounted for from it; and without this relation we can, even to a certain point, in many cases, make an abstraction of the secondary lesions; while in others the primitive lesion is so slight, either on account of its having always been so, or its having retrograded for some time before death, that this event can only be explained by means of the accessory lesions, and we are sometimes forced to admit that the patients would probably have recovered had these last not been superadded to the first. As facts of this kind are not rare, and as post mortem examinations, even to the present time, have been conducted with but little care, it is not to be doubted that they have contributed powerfully to maintain, even with the most intelligent, the ancient doctrine of fevers; since some have thought proper to deny that the small intestine was the seat of these diseases, because its lesions would not explain always the cause of death in those who succumbed. We shall, therefore, concentrate on this point, in a general manner, the facts scattered throughout the individual cases.

“In eighteen cases, or rather less than two-fifths of those under consideration, death could not be explained from the state of the elliptical plates of the

small intestines, the intermediate mucous membrane, nor the mesenteric glands; for this purpose it was necessary to have recourse to the lesions of other organs, of the large intestine, of the stomach, &c. &c. &c. lesions, which in every case except two appeared to account sufficiently satisfactorily for the fatal termination. The following were the proportions in which the secondary alterations or lesions appeared to be the principal causes explanatory of death. It resulted from a phlegmonous erysipelas of the lower extremities in three patients; from an arachnitis, very recent and moderately extensive, in two others; from inflammation with exudation of lymph of the trachea, in two cases; in part from an œdema of the glottis in the first case; from an inflammation terminating in suppuration of the cellular sub-mucous tissue of the pharynx, in two subjects; from hepatization and obstruction of the lungs in two other cases; from the same lesion, with softening, more or less marked, of the mucous membrane of the stomach, in two cases; and in the two last cases from a great number of lesions, which, considered separately, could not be regarded as competent, of which the principal had their seat in the lungs, and the stomach in one case; of the stomach, where were found many ulcerations, of the heart, the liver, and the spleen very softened in the other.

"The proportion of the cases in which death could not be explained by the lesions of the small intestine, was not the same in all the groups of patients; it was more considerable in those who died after the twentieth day of the disease, than in those who were carried off before that period."

The author closes his view of the causes of death, by the introduction, at large, under this head, of three cases very fully detailed, in two of which death could only be referred to the state of the mucous membrane of the stomach, and the third very analogous in its character, but peculiar in this respect, that death occurred unexpectedly and without agony.

After this view of the disease, in respect to its symptoms, its lesions, and the causes, primary and secondary, of its fatal termination, we will present the author's observations on the remote and exciting causes productive of the affection.

"*Of the Causes.*—While the causes of enteritis are frequently evident, those of the typhoid affection are unknown; at least it is impossible to assign them after the observations which I have made: in fact, my researches on this point only confirm what experience has already taught, of some of the circumstances which favour the development of this disease, the age, the change of habits, and perhaps the sex.

"*Of the Age.*—The subjects attacked with the typhoid affection were young; the medium period of those who sunk under it was twenty-three years, the medium period of those who recovered was twenty-one years.

"Of the first class, or those who died, fourteen were from seventeen to twenty years—twenty, from twenty to twenty-five years—eleven, from twenty-five to thirty years—five from thirty to thirty-nine years.—Total fifty.

"Of the second class, or those who recovered, thirty-one were from fifteen



and a half to twenty years—thirty-nine, from twenty to twenty-five years—thirteen, from twenty-five to thirty years—five, from thirty to thirty-nine years.—Total eighty-eight.

“The slight difference observed in the medium age of those who died and of those who recovered, could not have been accidental, because before the age of twenty-five years, the number of patients who recovered was much more considerable than of those who died; while after that period of life, the number of those who died or recovered was nearly equal. In fact, if youth is a condition necessary to the development of the typhus affection, it is also less appalling, in proportion as the patients are less advanced in life. No individual under seventeen years of age died, although there were six cases.

“*Change of Habits.*—With some few exceptions, which I shall indicate, the persons attacked with the typhoid affection had resided at Paris but a short time, the medium term of those who recovered was fourteen months, of those who died, eleven months. Whence we must conclude, that if Paris, and the kind of life which is led there, are favourable to the development of the typhus affection, this disease presents less danger, in proportion as the abode in this city was less recent. This might be easily predicted or foreseen from the ordinary effects of acclimation.

“The following tables are detailed proofs of the preceding observations:—

“In those who died, ten had resided at Paris from two to three weeks—eight from three to five months—ten, from six to ten months—nine from eleven to twenty months—five, from twenty to thirty months—two, from four to eight years.—Total forty-four.

“Among those who recovered, seven had been at Paris from two weeks to three months—nineteen, from three to five months—nineteen, from six to ten months—twenty, from eleven to twenty months—twelve, from twenty to thirty months—one, from thirty to forty months—seven, from four to eight years.—Total eighty-five.

“That is to say, of the seventy-three persons attacked with the typhus affection, and who had resided at Paris from two weeks to ten months, twenty-eight, or more than a third of them died; while of fifty-six who had resided there for a space of time more considerable, sixteen, or less than a third part only died. Three of the patients who recovered and one of those who died, had resided at Paris from infancy. We perceive, besides, that in order for these numbers to be an expression of exact truth, there ought to have been of all the different classes of workmen, of Paris, of all ages in the same proportion in the hospitals, which was not absolutely the case; a very considerable number of those who had been established there many years, received attention in the city; but with even regard to this fact, it is not less incontestible, that the typhus affection is much more frequent at Paris among those newly arrived, than among those who have resided a considerable time.

“*Difference of sex,* seems at first view, to have a great influence on the development of the disease which occupies our attention; for of one hundred and thirty-eight subjects who were affected, thirty-two only, or less than a fourth part were of the female sex, and my observations have been made in the rooms where the number of beds destined to either sex was the same. But this influence, if it exists, is without doubt much less in reality, since the number of

men who come to Paris, is, according to all appearances, much more considerable than that of women. And what confirms this manner of viewing the subject is, that the mortality was the same in the two sexes, which would not be, without doubt, if the predisposition to the disease was more considerable in one sex than the other.

*“Of Professions.*—I have also examined if a different profession had not some influence on the development of the typhus affection, and with that view I have divided the patients into those in whom the profession excited a considerable development of the animal powers, and in those of whom the occupation did not necessarily produce this development. The first were to the number of seventy-seven, the others fifty-five, a difference not considerable; less real than apparent, perhaps, under the point of view which occupies us, owing to this fact, that the workmen in each respective profession not being probably equally numerous at Paris, as we may judge from the large number of masons and carpenters who abound there. This view of the subject is sustained from what I have remarked in relation to the sex, that the mortality does not differ sensibly among the two orders of subjects; in fact, that the disease had a fatal termination in eighteen of those of whom the profession was but little fatiguing, and in twenty-eight individuals who were in opposite circumstances.

*“Of the constitution, moral suffering, excess of labour, and excess of the table.*—The patients attacked with the typhus affection were generally of strong constitutions; but to know whether those of strong constitutions were more frequently affected than the feeble, we must know the proportion of the one to the other in the new comers to Paris, of which we are ignorant.

“As the mortality was the same at all times, both in the strong and the feeble, proportions being respected, we can presume that the typhus affection was not more frequent in the first than in the second.

“The facts which I have collected do not lead me to ascribe more to the excess of labour, anxiety, and mortifications of all kinds, as causes of the typhus affection; since only the seventh part of those who recovered or died, had distressed more or less profound, or had laboured beyond measure during a certain time; nor is it possible to know whether these individuals, who were, besides in the same circumstances of age and of place as the others, would have experienced or not the typhus affection, had they been exempt from pain or had laboured moderately.

“A residence in a low place, or inhabited by a great number of individuals during the night, could not be assigned as causes, as only the eighteenth part of the patients were thus situated. An equal number of patients partook at one time or another of wine to some excess; but these excesses did not precede immediately the symptoms of the affection, or at least there was an interval from two to three days in every case.

“The most profound obscurity reigns then on the causes of the affection which occupies us. But these causes, whatever they may be, have without doubt a certain part in the mortality and the development of the secondary lesions; this we can say of many of the severe diseases which manifest themselves also, without any appreciable cause or under the influence of exciting causes so light that they prove the existence of predisposing causes. At all times we

should not attribute to these a too great part in the mortality or the febrile excitement, as it appears to me some persons have done, who have more particularly fixed their attention on the case where the alteration of the small intestine was inconsiderable and disproportioned to the violence of the symptoms. We have seen in effect, in the first part of this work, that the number of elliptical plates altered were generally considerable, from twelve to fourteen, in two-thirds of the subjects of whom I have recorded the history; these plates had in their medium size, more than an inch of superficies, about an inch and a half, and formed by their reunion a considerable surface, superior in the most part of the cases to that of the inflamed skin in erysipelas of the face. These plates being altered, the corresponding mesenteric glands became also in an analogous manner affected very soon; and the mucous membrane intermediate to the plates suffered in most part of the cases a greater or less severe lesion; if we add to this, that the altered plates were constantly in contact with matters which were irritants to them, we will be convinced that the febrile excitement observed in the typhus affection was not more in proportion to the state of the small intestine, than that which exists in erysipelas of the face is to the extent of the inflamed skin. If we are not capable of appreciating every thing by the senses, if there are other circumstances than what we have observed in the typhus affection, it is the same, in almost all the internal maladies, which are not less mysterious in this respect than fevers."

To the fourth part of this work, or that which relates to the treatment, the author has only appropriated between sixty and seventy pages.

"If it is difficult," he observes, "with only a limited number of exact observations, to describe, with precision, the symptoms; the progress of an affection; and, in general, to expose clearly all that we may deem necessary to be known respecting it; how much more difficult is it even to indicate, not only the best method of treatment, but to appreciate, in a rigorous manner, the effect, whatever it may be, of a therapeutic agent. It does not suffice, however, for this purpose, to estimate the immediate effect of this agent, which is not so easy as we might at first suppose; but we must also especially indicate the result of its action relative to the mortality, and to the rapid or slow march of the disease; and to arrive at this conclusion it is necessary to compare together a great number of cases of the same affection, presenting the same degree of severity; some cases in which the disease had been abandoned to itself; and others in which different medicines had been administered. This accomplished, we ought to study the effects of the same therapeutic agent, both in severe and slight cases; in those in which it is employed in strong or in feeble doses, at periods proximate or remote from the commencement of the disease, alone or concurrent with other means; and this exacts, not only a great deal of labour, but supposes a considerable series of facts, the reunion of which is difficult, especially in severe diseases, the danger of which excites us constantly to new efforts, and does not permit us to remain as spectators merely. But in order to judge correctly on this subject, it is not enough for us to indicate, with considerable exactness, the methods which appeared to have more or less success; but to demonstrate in an incontestable manner, that a medicine or re-



medy is useful or injurious; which is always more or less the case, according to the manner and the circumstances in which it may have been employed."

From these preliminary observations on the treatment, it must be evident, that the author does not pretend in a definitive manner to establish the value of the therapeutic agents employed in the course of this affection. The facts and observations, however, which he has established on this point, will not be destitute of interest and utility, and he has arranged them under the respective heads of blood-letting, tonics, blisters, ice to the head, &c.

I. *Of Blood-letting.* Under this head the author embraces both general and topical.

1st. *In subjects who died of this disease.*—In fifty-two patients of this class, thirty-nine were bled more or less frequently; the others were not. The mean duration of the disease in the first was twenty-five days and a half, and twenty-eight days in the second; so that, at first view, it would seem, that blood-letting hastened the fatal termination. In order to give this calculation due weight, we ought, undoubtedly, to abstract from the list of those bled, the cases, in which it was so very inconsiderable in quantity as to produce little or no impression on the disease, and those in which it was practised at a remote period from the commencement of the affection. Calculated, on this principle, the mean duration of the different classes changed a little, being, in the individuals not bled, bled too late, or bled in too small quantities to answer any useful purpose, twenty-six days; and in those under contrary circumstances twenty-six and a half days. Blood-letting would, therefore, appear not to have had any influence, or, at least, very inconsiderable on the progress of the disease in those cases which terminated fatally. In five patients of this class who were bled more or less largely by means of the lancet, or leeches, or these united, in the first five days of the affection, its mean duration was twenty-one days; and in seven other subjects bled in the same manner, as abundantly, from the sixth to the tenth day, the mean duration was twenty-three days. Thus it would appear, that the fatal progress of the disease was more rapid in those largely and promptly bled, and that too in proportion as the first emission of blood approximated to the commencement of the disease.

It may, perhaps, be objected, that blood-letting in those cases in which it was practised, was not the exclusive remedy, and that the subsequent administration of tonics may have neutralized the influence of the bleedings. Facts do not support this objection.

Of twenty-one patients who were bled sufficiently freely, and be-

fore the second half of the disease, seven took tonics, two of them powerful tonics, and the mean duration of the affection was thirty-one days. The blood-letting in these seven had not been more largely practised than in the others; and, therefore, the duration could not be ascribed to that circumstance.

Four patients experienced decided relief immediately upon blood-letting being practised. This relief was experienced by one of them after each of the two first bleedings practised before the seventh day of the disease, which did not prevent death taking place on the fourteenth day, after an additional bleeding, and three applications of leeches.

The other patients, on the contrary, suffered more, and were more uneasy on the day succeeding the bleeding, than they had been before. If, on account of the ordinary progress of the affection, we ought not to conclude, that the blood-letting had been really injurious in these cases, we may, at least, with propriety admit, that it did not impede the progress of the affection.

*The pulse* was observed on the same and succeeding day on which blood-letting was practised in one-half of the cases. It was found to be a little less accelerated after, than before the emission of blood, in four patients bled at different periods of the disease, but for a short time only. It preserved in the others the character and the quickness which it had immediately before bleeding, or it became more accelerated on the day succeeding to that on which it was practised; nevertheless, one of those affected in this manner experienced some relief after the emission of the blood.

“Although, as we shall presently see, we cannot attribute, in a positive manner, the diminution of the quickness of the pulse observed in the preceding cases, to the depletion of the circulatory system; yet it is correct, nevertheless, to say, that it was more common after bleeding by the lancet, than after the application of leeches; in fact, that if the emission of blood proved useful in the typhus affection, and, if we may come to a rigorous conclusion from the small number of cases in which it was employed, the method by the lancet should be preferred to the application of leeches.”

*The delirium* diminished the day after bleeding, in two cases, and ceased in a third in whom it had existed previously in a feeble degree. In the others the cerebral functions, in whatever state they might be, did not experience any appreciable change, or else the delirium commenced the same evening or on the succeeding day to that on which the bleeding was practised, or it assumed more violence. This perseverance or this augmentation of the cerebral symptoms occurred in a very considerable number of subjects, however abundant the blood-

letting, and in whatever manner practised. It is proper also to remark, "that the amelioration observed in the three cases noticed, followed not the application of leeches, but blood-letting by the lancet, which confirms what has just been said of the preference given to the last mode of bleeding."

The amelioration of symptoms as respects the abdomen was not more marked. The diarrhœa diminished a little in three cases on the day following the blood-letting when it was practised with the lancet. It continued to the same degree or increased in the other patients. The pains of the abdomen augmented twenty-four hours after blood-letting in one case; they were stationary in the others or did not diminish in the least. The tympanitis occurred for the first time, or became more developed the day following the opening of a vein in two subjects. It did not diminish in any, in whatever manner the blood-letting had been practised.

The tongue was sensibly more moist the day after blood-letting in one patient.

Thus "the happy changes observed in the state of the pulse, in the heat and the cerebral functions, subsequent to blood-letting have been rare; much more frequently, the state of the circulation, and the other functions remained the same, or became more severe under the same circumstances, in such a manner that it is impossible to affirm the amelioration indicated was really the effect of the blood-letting. The observation of the symptoms in the subjects who were not bled, or at some distance of time from the emission of blood in those who lost some blood, sustains this doubt."

The pulse presented more or less variation, from the eighth to the twentieth day of the affection, in nine subjects who were not bled, and in one of them which will serve for an example, it beat successively 108, 112, and 90 strokes in a minute. It presented similar changes in five patients who were bled in the first ten days of the disease, and in two others who were bled after this period. The heat of the skin presented the same alternate augmentation and diminution in a fourth part of the cases. Analogous variations in the delirium occurred also in two cases.

Very marked variations were also observed in the stools in a fourth of the subjects, four, five and six days in succession; both in those who were bled once or oftener, before or after the detraction of blood, at a period more or less considerable; and in those patients from whom blood had not been extracted by any means, and independently of tonics also, which had not been administered except at a very remote time. And as an example of these spontaneous variations in the frequency of the stools, we may mention one case, in which



from the fifteenth to the eighteenth day of the disease inclusive, the stools were in number five, ten, three, and eight; each number corresponding to the respective intermediate day.

These spontaneous variations confirm what was said in the first place, of the difficulty of appreciating the immediate effects of therapeutic agents, the most energetic in appearance.

2d. *Of Blood-letting in subjects attacked with the typhus affection who recovered.*—Of eighty-eight patients thus circumstanced, sixty-two were bled; blood was not taken from the others either on account of the feebleness of the reaction, or because they were brought to the hospital at a period remote from the commencement of the disease. The mean duration of the affection in these was thirty-one days, and in the others thirty-two days. In seventeen individuals in whom the affection was severe, blood-letting was practised twice from the first to the tenth day, and from ten to twelve ounces at each time, and the mean duration of the disease was thirty days. The mean duration was thirty-two days and three-quarters, in subjects in whom the first bleeding was practised from the tenth to the twentieth day; that is to say, that in severe cases where the blood-letting was practised in the first ten days, in the manner indicated, it appeared to have abridged the progress of the affection three days. The effect of the loss of blood was very nearly the same in those subjects in whom the affection was slight; so that in those who were bled from the first to the tenth day, the mean duration was twenty-five days, or three days less than in analogous cases in which no bleeding had been practised. The mean duration was about thirty days, in those in which the first bleeding was not performed until from the tenth to the twentieth day. Practised in the first ten days of the affection, blood-letting appeared to abridge its course, whatever might be the degree of its severity or mildness; but employed after this period, it appeared to be more injurious than useful in those cases where the disease was mild. There appeared to be no difference in the mean duration, whether the blood-letting was accomplished by the lancet or leeches. Four patients bled from the first to the tenth day, in whom the affection was severe, took tonics from the fifteenth, twenty-sixth, and twenty-eighth days, and the mean duration of the disease was thirty-three days; precisely the same as in analogous cases in which blood-letting had not been performed, and three days longer than in those cases collectively where the blood-letting was sufficiently abundant in the first ten days of the affection.

As to the immediate effects of blood-letting, it was not more decisive in those who recovered than in those who died. Thus in the

third part of those who were bled in the first ten days of the affection, the pulse remained stationary the day following the operation; it was a little more accelerated at the same period in an equal number of subjects; while its quickness diminished some pulsations in the others but for a few days only. It did not present any appreciable change the day after the bleeding, in those cases where it was only practised from the tenth to the twentieth day; and in the small number of subjects who were not bled until after the twentieth day, the quickness of the pulse augmented or diminished the day following in an equal number of cases.

In a very great majority of those where the blood-letting was practised from the first to the tenth day, the heat was stationary twelve or twenty-four hours afterwards; it augmented in two subjects, and diminished in another. It did not present any appreciable change in three-fifths of those who were bled from the tenth to the twentieth day; it appeared to be diminished a little in the most part of the others, for a short time only; and it augmented, as did the quickness of the pulse after each bleeding, in a subject who was bled three times before the fourteenth day of the disease.

Blood-letting did not in any case diminish the delirium, the somnolency, nor the stupor; in the most part, on the contrary, these symptoms were more decided on the day following, than on that when the blood-letting was practised. In two individuals the delirium commenced eleven hours after blood-letting.

The abdominal pains ceased the day after blood-letting was employed, in three cases; the reverse took place in two others, or the pains commenced at this period.

The tympanitis augmented considerably, in two subjects, in the same circumstances. The stools were also less numerous in five cases, after the first or second bleeding; in another, the day after the application of leeches to the anus. They diminished after the application of leeches to a seventh subject, and were stationary in the others. The tongue did not present appreciable changes the day following blood-letting, in one-half of the subjects; and in the other half it was either more moist or more dry, in very nearly an equal number of cases.

The author closes his observations on blood-letting with the following summary conclusions:—

“The facts collected under this head would seem to indicate, 1st, that the immediate effect of blood-letting, or that which could be observed on the day succeeding the blood-letting, on the condition of the symptoms of the typhus affection, was nothing, or almost nothing, or at least that it was not evident;

2d, that blood-letting practised twice, in the first ten days of the affection, had the effect of abridging a little the course of the disease.

“But did blood-letting arrest from death any of those patients who recovered? The preceding observations would seem to indicate that it had, for if the emission of blood could abridge from three to four days the duration of the affection, it accomplishes this object, doubtless, in modifying the lesions on which the disease depends; in arresting, perhaps, those of whom the progress would have been fatal, and in diminishing the liability to secondary lesions, which become, in many cases, the true causes of death, and an examination of those cases in which the issue of the disease had been favourable or unfavourable, seems to confirm this view of the subject.

“Of eighty-one subjects who experienced severe symptoms, and who were bled, thirty-nine, or nearly the half of them, perished. Of twenty-eight in whom the affection presented the same character, and who were not bled, thirteen, or nearly one-half, died.

“This first result, as many of those which precede it, seems to indicate that the emissions of blood had not an appreciable result on the mortality of the disease.

“But of twenty-nine patients who were bled twice, from the first to the tenth day of the disease, twelve only perished, or about four-tenths; that is to say, that, treated in this manner, the disease was rather less frequently mortal in the whole of the cases where blood-letting had been practised, than in those where it had been abstained from entirely.

“Of the fifty-two other subjects who were also bled, some were bled in the first ten days of the affection to the extent of at least twelve ounces; the others after this epoch, and lost for the most part, (the six-sevenths of them,) from twenty to twenty-four ounces of blood, some of them more. Of the first, who were fourteen in number, seven or the half perished; and of the second, who were thirty-eight in number, twenty died.

“It appears then, 1st, that bleeding practised in the first ten days of the disease, to the extent of twelve ounces, and repeated twice in severe cases, has saved the lives of some individuals; because, among the subjects not bled, the number of those who recovered was not superior to the number who died, but to about one-fourteenth; and that among those who were bled in the manner indicated, this excess in the number who recovered was one-sixth; 2d, that the blood-letting performed at the same period, but only once and to a less extent than twelve ounces, was without effect; 3d, that it was injurious when practised for the first time from the twentieth to the twenty-fifth day, and sufficiently freely. Thus, under some of the points of view in which we have considered the facts, we see in blood-letting a therapeutic agent of some utility in the course of the typhus affection, when it is practised and repeated at a period proximate to the commencement of the disease.”

*Of Tonics.*—1st. In those subjects who died of the typhus affection, eighteen patients took tonics; the mean duration of the disease was thirty-five days less a quarter in them; twenty-six days only in those individuals who were placed under circumstances the most favourable in appearance to the loss of blood, were bled, and did not take tonics;



in fact, it would seem at the first view, that tonics exercised a great influence on the duration of the disease, having prolonged for a decided period the lives of the patients to whom they were administered. But this influence, much less in reality than in appearance, requires, in order to be properly appreciated, that we should enter into some details. The tonics were not always administered in such a manner that their action could be appreciated, precisely in the point of view under consideration; this was the case in all the patients who did not use them until within the last few days of life, when they were so bad that they could not hope that any remedy whatever would be useful to them, and also in those who only took them for two or three days. In subtracting these cases from the sum total, and in preserving for the present consideration, those only where tonics had been administered six or eight days or more in succession, there remain thirteen subjects, in whom the mean duration of the affection was thirty-six days and a quarter; that is to say, that the mean duration of the disease in those which had taken tonics for a period of time more or less considerable, was to that of those individuals to whom they had not been administered, as thirty-six to twenty-six days.

But this relative difference of the medium duration, is considerably too great, for this two-fold reason, that the first term is too great, and the second is too small. The first is too much enlarged, since three of the patients who had taken the quinine commenced at an advanced period of the disease, or from the twenty-sixth to the thirtieth day, and in retrenching them from the thirteen cases just indicated above, the mean duration of the affection did not exceed thirty-two days and a half. The second relative term is too small, inasmuch as it was formed, in a great part, of individuals carried off too rapidly to have taken tonics; so that in subtracting from the mass of subjects those of this description, or those who died from the eighth to the fifteenth day of the affection, this second will become twenty-nine in place of twenty-six; and the relative mean duration of the disease in those who had been treated by tonics, and those who had not taken them, is as thirty-one days and a half to twenty-nine. We must therefore conclude, making allowance however for any mistakes which may arise from the limited number of facts, that tonics were useful in the cases in which they were exhibited, in retarding for some days the fatal termination.

But among the patients who took tonics, some had been bled, and others had not; and in the first, to the number of five, the mean duration of the affection was thirty-four days and a half, while it was

only thirty in the others, that is to say, that without ceasing to be generally useful, in the cases where they had been administered during a certain space of time; the tonics were more beneficial in the subjects bled, than in those who had not been.

2d. *In subjects of the typhus affection who recovered*, tonics were prescribed to eighteen patients out of fifty-seven in whom the affection was severe. The mean duration of the disease in them was thirty-four days, and in those who did not take tonics, thirty-four days and a half, a difference which might be overlooked without any sensible error; so that it results from this first view, that tonics had no appreciable effect on the mean duration of the affection. But seven of the individuals whom we have regarded as having taken tonics, either took them for too short a time, or took them too late, (from the twenty-fifth to the thirtieth day of the disease,) to be considered as embraced in those which ought to concur to form the mean duration; subtracting these from the number, and then the mean duration will be thirty-one days and a half, or less by seventy-two hours. Of the eleven remaining subjects, eight were bled at various periods of the disease, three were not; and the mean duration of the affection in these was only thirty days, although the symptoms had not been less severe than in many cases where blood-letting had been prescribed.

*Of Blisters.*—1st. *In those subjects who died of the typhus affection*, the greater number had blisters applied to the inferior extremities; they were abstained from in others on account of the absence or the slight development of the cerebral symptoms; and in retrenching from the first those who were reduced to the last extremity previously to the application of the blisters, the mean duration of the disease was the same in both classes, or twenty-six days. The effects of blisters on the individual symptoms were observed in about half the patients on whom they were applied. The heat generally diminished temporarily the day after their application, in a fourth part of the cases; it appeared, on the contrary, augmented in a like number; and did not present any appreciable change in the others.

The immediate influence of blisters on the state of the circulation in the above cases was not more evident. The pulse was a little less accelerated the day after the application of the blisters, in six subjects; a little more accelerated, on the contrary, in a like number; and it did not present any appreciable difference from its previous state in the others.

The cerebral functions did not present any appreciable changes in a majority of the cases, or near two-thirds. Of the ten others, two had a cessation of the delirium and of the jactitation the day fol-

lowing the application of the blisters; three in which the symptoms exhibited more intensity; and in three others the somnolency and stupor made continued progress, as might be remarked of many other symptoms, whatever means were opposed to them. The examination of the digestive functions led to the same result; in fact, "in whatever light blisters might be viewed, they were found to have produced no sensible effect either on the duration of the affection or the progress of the symptoms in the fatal cases."

2d. *Of the application of blisters in subjects attacked with the typhus affection who recovered.*—To ascertain the influence of blisters on the progress of the disease, the author makes a comparison in the first place between those patients, who, having been bled, took tonics; and those to whom they were not administered. In those cases where bleeding and blisters had been prescribed, the mean duration of the affection was thirty-five days; it was only thirty in those who were restricted to blood-letting, so that in fact at first view, the blisters appeared to have been injurious.

But this conclusion is far from being rigorous, the affection having been much more severe generally in the first subjects, than in the second. In those who took tonics, all more or less severely affected, the difference was analogous, but much less so, one day only; so that, if a general conclusion could be deduced from so limited a number of facts, it would be, that blisters are injurious by retarding the convalescence of patients; this does not surprise us, since the lesions of the skin, more or less profound, which result from their repeated application to a part, clearly evince their morbid action, slight, it is true, but joined to one, or often many other affections existing at the same time in the system, it is difficult to conceive how they can accelerate the favourable termination of a disease.

*In regard to the immediate effects of blisters.*—The heat was observed with care the day and that following their application; in twenty out of thirty cases where they were applied, a slight change only was observed in two patients, it was diminished in one, and augmented in the other.

The pulse in every case was studied in the same manner; the number of pulsations was augmented ten strokes in two patients; six in a third, on the day succeeding to their application; it was stationary in the others, or only presented slight differences, which were equally observed at every period of the affection when noticed daily, where diluents only were administered.

The delirium disappeared the day after their application in one case, where it had existed in a slight degree for four days; the de-



lirium, somnolency, and stupor, increased in five others. In the remaining cases the state of the cerebral functions was stationary.

The slight changes observed in the temperature and the cerebral functions existed in a larger proportion in those patients to whom blisters had not been applied; whence it results, that they had no appreciable immediate effect in those patients who recovered, except that, perhaps, they retarded a little their convalescence.

“If such, in fact, is the result of experience, blisters ought to be banished from the treatment of the typhus affection, especially as no one is ignorant of their mischievous effects; the loss of skin which they occasion, and the slowness with which their surfaces heal in many cases. Useless in re-establishing the cerebral functions, they concur on their part to maintain or augment the febrile excitement, and its fatal consequences; their effect as a derivative mean in many of the inflammations which declare themselves in the course of the typhus affection, is more than doubtful, after what has been observed above; an inflammation, but moderately extensive of an organ, causes, almost inevitably, one or more inflammations in its course. In fact, that under whatever point of view blisters might be regarded, they were always found inconvenient in this affection, without affording any advantages which could counterbalance these effects.

“Tonics applied to the blistered surfaces of a bad aspect, changed rapidly their colour, caused their cicatrization in a very short time, and afforded an additional proof of the benefit which ought to result from the use of bitters in certain internal inflammations at their advanced stage; and especially in the typhus affection under the circumstances indicated above; because there is, most generally, a relationship existing between the state of the blistered surfaces, and that of the elliptical plates of the ileum, inasmuch as when these are more largely ulcerated, so are the blistered surfaces bad in appearance, and more disposed to ulceration.”

*On the application of ice to the head.*—From one to eight pounds of ice were applied to the head, ordinarily frequently repeated, in ten subjects in whom the affection had a fatal termination, where the delirium had resisted different therapeutic agents, (blisters, sinapisms, leeches to the neck;) and, with the exception of three cases, no change in the state of the cerebral symptoms followed its employment. The somnolency was a little less than before the application of the ice in one of the cases; there was a little more calm the night following in another; and, while the ice was applied to the head, the third patient replied yes and no, which he had not done before. It should be noticed, also, that—

“In seven of the subjects to whom it was applied, the employment of the ice was combined with the application of leeches, sinapisms, blisters, and even general blood-letting in some; means which are generally regarded as having more or less success, and the inutility of which tends at least to prove that, at

a certain period of their course, the diseases pursued their progress with an obstinacy on which our therapeutic agents exerted an influence extremely limited."

Two of the patients who recovered had ice applied to the head. The delirium which had existed for six days in one of them, diminished on the next day after its use; a diminution which would, perhaps, equally have taken place, had the ice not been applied; the delirium having attained, at this period, the most ordinary limits of its duration. There was no amelioration of the delirium in the other subject in spite of the united effects of ice, of derivatives, and of leeches to the neck.

To do justice to the present work, we ought, perhaps, to follow the author in his general treatment of the typhus affection; but as this part abounds more in remarks and deductions than facts, we shall not trespass longer on the reader's patience, but close our imperfect analysis of this highly interesting work; which we present to the profession as a model of medical research, worthy of imitation. On all occasions we have endeavoured, as far as practicable, to exhibit the facts and observations of the author in his own phraseology; and shall conclude with this remark, that if every morbid affection were investigated with the same ability and accuracy, and the results detailed with the same candour which are evinced in this work, by those to whom is confided the medical charge of large clinical institutions, a flood of light would beam upon medical science, which would enlighten many parts of it, now apparently enveloped in almost impenetrable darkness.

J. BARNES, M. D.

## BIBLIOGRAPHICAL NOTICES.

XVII. *Encyclopädisches Wörterbuch der medicinischen Wissenschaften. Herausgegeben von der Professoren der medicinischen Facultät zu Berlin; C. F. von GRÄFE, C. W. HUFELAND, H. F. LINK, K. A. RUDOLPHI, F. von SIEBOLD.* Erster Band. 8vo. pp. 675. Berlin, 1828.

We should have presented an account of this first volume of the *Encyclopedic Dictionary of the Medical Sciences* some time since, but for the unfortunate loss of the copy forwarded by our respected correspondent, Professor OSANN, whose letter by the same conveyance came safely to hand, though the book has never been received. Having, through the kindness of a friend, procured sight of another copy, we are enabled to give a brief account of its character.

In addition to the editors, whose names are above mentioned, the *Encyclopedic Dictionary* is to be enriched by contributions from a great number of the most active and distinguished of the profession in Germany. The object they propose to accomplish, is that of presenting a substantial account of the actual state of knowledge of all subjects important to the profession, and within the limits of a comparatively few volumes, to supply practitioners distant from great cities and public libraries, with an authoritative book of reference. To effect this, the editors have resolved to make it a scientific condensation or review of the subjects presented, without losing sight of its character as a dictionary: to treat of all scientific subjects necessary to the profession, at the same time carefully avoiding prolonged and excursive dissertations, which usually swell works of this kind to an inordinate volume; give short histories of the actual condition of knowledge, with an indication of the sources of literary aid for its acquisition, and by explanations of technical, as well as antiquated, though not entirely obsolete words, to aid in the better comprehension of the more ancient writers. The work, it is believed, will be comprised in 28 vols. 8vo. and be completed within six years from the commencement of its publication.

We have examined most of the interesting articles contained in this volume, and think they may be advantageously compared with similar articles of the *Medical Dictionaries* previously in our possession. In conciseness and condensation, they are generally praiseworthy, conveying the needful information in a clear and energetic manner. Even where, from the nature of the case, the article is long, judicious arrangement of material and perspicuous statement of details, free them from the tediousness so justly complained of in some other scientific dictionaries. The compilers of the work before us have, unquestionably, profited extensively by the labours of their predecessors, but there is nothing like servile copying, or imitation in any respect.

The articles on mineral waters from the pen of OSANN, are characterized by much originality and indefatigable industry of research. The physiological observations of RUDOLPHI, those of von SIEBOLD on obstetric subjects, and those on topics connected with materia medica and practice by the venerable HUF-



LAND, are very valuable and well suited to maintain the respectability of the work. Some of the writers occasionally indulge in general disparaging observations on BROUSSAIS and other systematists, in the bad taste, commonly characteristic of mediocrity of talent and acquirement.\* Among the surgical articles, that on Paracentesis, (*Abzapfen*,) by Dr. Baltz, a regimental surgeon of Berlin, is interestingly instructive, and highly creditable to the author.

The "literature" appended to the articles is mostly copious, but the notices are not brought down to as recent a period as might have been expected, especially in a work published subsequently to SCHREGER's excellent *Elements of Surgery*.† However, as the work is expressly intended for Germans, the references to foreign works were restrained to those most immediately necessary, rather than extended to all the writings on the different subjects. The *Encyclopedic Dictionary*, if completed according to the model of the first volume, cannot fail to become a valuable work of reference, and an useful addition to the medical library.

J. D. G.

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XVIII. *Pathological Researches into the Nature and Treatment of Dropsy of the Brain, Chest, Abdomen, Ovarium, and Skin; in which are demonstrated the Inflammatory Origin of these Diseases, and the General Facility of their Cure under a new and greatly Improved Method of Treatment.* By JOSEPH AYRE, M. D. Member of the Royal College of Physicians, &c. London, 8vo. pp. 287.

This is the second edition of a book which we think furnishes a most rational exposition of the pathology of a class of diseases so dangerous, and of such ordinary occurrence, that the physician must be very reprehensible who omits any opportunity of acquiring a knowledge of their nature, and the best modes of treatment. The views exhibited in the present treatise must, we believe, eventually tend to remove dangerous errors in theory, and lead to modifications in practice at once more safe and more efficacious than the modes of cure which have been most commonly pursued; for dropsies, like many other diseases, have been too often treated according to a blind routine.

The idea usually attached to the term dropsy is that of a watery accumulation in some part or cavity of the body, but our author, who regards the effusion as only a symptom, or one of a series of effects arising from a morbid condition of certain tissues, would employ the term in a much more comprehensive sense. Rejecting the common explanations in which the causes of dropsical effusions are chiefly referred to loss of tone in the exhalent and absorbent systems, or mechanical obstructions arising from diseased liver, or other viscus, he attributes them to a morbid action in the cellular tissues, allied in its nature to ordinary inflammation, and subject to the same laws. "It is," says he, "a well known property of common inflammation to be suddenly translated from one part of the system to another, which is termed a metastasis. This property is also observable in the action producing the serous effusion; and, although it has been supposed to be only the fluid which is thus suddenly removed from one part of the body to another, it is, unquestionable, that, in these cases at

\* See the article Blood-letting, (*Aderlass*,) p. 387.

† See *American Journal of the Medical Sciences*, Vol. I. p. 414.

least, the metastasis is exclusively of the action which produces the serous discharge. The action likewise occasioning the effusion, as seen in anasarca, usually commences at a given point, and is gradually extended thence in a continuous course, analogous to what occurs in inflammation, and particularly in the erysipelatous kind, to which it bears a very strong resemblance, and into which, indeed, it is easily convertible."

The variety observable in the effused fluids, our author explains by a reference to the results of common inflammation varied by its greater or less intensity. The lowest degree occasions an increase in the quantity of the proper fluids of the part. In the mucous membranes the product is a mucous fluid, whilst in the cellular and serous, the secretion is limpid, consisting chiefly of serum more or less charged with albumen. A higher degree of inflammation yields coagulable lymph, and one still higher pus. As the inflammatory action abates on the occurrence of the effusions, these are looked upon by our author as in some degree remedial, similar to the suppuration of a phlegmon, or the vesication arising from the application of cantharides, both which occurrences are followed by a subsidence of the pain, just as we observe in the extremities on these becoming anasarcous.

The vascular excitement in the serous tissue may be, 1st, sub-acute or chronic; 2d, symptomatic or idiopathic; that is, arising either from some particular disease, or the common causes of inflammation, which causes may be either general or local; 3d, the serous inflammation may be either local or general, giving rise to a general or local effusion.

Thus much in a general way relative to the pathology of this class of diseases. In treating upon the particular forms of dropsy, our author makes the following observations.

"When the discharge takes place into the brain, it may occur either as an incidental effect of that acute inflammation of the organ, which answers to the phrenitis of nosologists, and of which the proper morbid result is coagulable lymph; or under its proper form of serous inflammation, when, relatively to phrenitis, it will be in a sub-acute or chronic state, with the watery effusion as its natural product. It may be either idiopathic or symptomatic. When the former, it may be induced by a general state of the system, answering in its nature to the scrofulous diathesis, &c. When symptomatic, it may arise from some structural disease within the head; or, secondly, from some relative weakness of its venous system; or, thirdly, from a distant irritation in the digestive organs. When the attack of the disease proceeds from the first of these causes, it is usually severe, and answers in its symptoms to the water stroke of the German writers. When from the second, the disease corresponds to the serous apoplexy of systematic writers; and, as it respects its approach, is usually chronic, though generally sudden in its termination, by the arterial reaction being rapidly, sometimes instantly, succeeded by the effusion. When it proceeds from the third cause, the turgescence of the brain, which gives origin to symptoms that simulate those of the true disease, arises as a direct effect of chylipoietic disturbance, and is remediable, until arterial reaction commences, by means directed solely to its remote cause."

The treatment founded upon these views should be adapted to the following

indications, namely, to remove the causes, and correct that turgescient state of the brain, which may produce the arterial reaction and effusion; and, secondly, of those which shall subdue the excitement when formed; thirdly, to correct or relieve, as far as practicable, the effects of the effusion; and procure, if possible, its absorption. Dr. Ayre judiciously disapproves of the general and free use of calomel in this disease, which medicine, he thinks, should never be administered except in cases of functional disturbance in the liver, or other chylopoietic viscera, when in conjunction with local bleeding, &c. it may afford most important service. "The cases reported of its great success in this disease, have," says he, "been examples of this form of it; and conclusions respecting the suitableness of the treatment by mercury, under all circumstances of the disease, have thus been hastily and erroneously drawn." Dr. Ayre considers the symptomatic form of hydrocephalus more common than the simple inflammatory, and acknowledges the difficulty which often arises of distinguishing between them, disturbance in the brain often producing disordered secretions from the liver, and other chylopoietic organs. Without enumerating the various remedies pointed out by our author, we will barely mention that he considers mild aperients much more suitable to this disorder than those of an active nature. He cautions against the discontinuance of medical treatment immediately on the occurrence of what appear to be symptoms of effusion, since these are frequently observed to lose their factitious character, and suddenly disappear under the employment of means nowise adapted to such a state.

Our author has done little towards removing the obscurity which attends upon visceral diseases of the chest, and often renders it so extremely difficult to determine their precise seat. A chronic disease, for example, seated in the serous tissues investing the heart, or lungs, &c. will afford, in general, but very indistinct indications of the mischief to which they are leading, until, by the extension of the chronic inflammation to the outer serous membrane, an effusion begins to take place. In ordinary cases of hydrothorax, general blood-letting will not be requisite, local depletion, combined with blistering, being best adapted to correct that chronic action of the serous membranes which leads to effusion. Dr. Ayre lays great stress upon the important advantages derived from the application of leeches, cups, blisters, &c. upon surfaces contiguous to organs affected with the chronic inflammation which tends to effusion.

In regard to the connexion so often subsisting between diseases of the liver and dropsy, our author observes, that, analogous to what occurs in the thorax, the chronic excitement of the serous membrane, investing the organs, or lining these cavities, is generally kept up by a corresponding state of the diseased viscus; and that, therefore, local depletion by cupping or leeching is necessary to both, and will often succeed in reducing the primary disease into an indolent state, and thus put an end to the secondary one depending on it.

Dr. Ayre regards the practice so general of administering mercury in abdominal dropsy, as founded upon erroneous pathological views, and as frequently productive of very injurious effects. He considers the condition of the system induced by salivation, as allied to that which prevails in dropsy, and thinks it not improbable that the mercurial inflammation, when considerable, may survive its specific cause, and degenerate at length into the purely hydropic state.



Such is our author's opinion of the use of mercury pushed to salivation, but when given in minute doses, so as to avoid this morbid condition, he thinks it capable of becoming highly useful.

Dr. A. approves of the employment of drastic purgatives in ascites, which he thinks may not only prove beneficial by assisting to carry off the water, but by producing a counter-action in the mucous membrane of the bowels, which may tend to relieve the serous tissue investing them from the morbid action which caused the discharge, and even exert a similar effect upon the primary affection of a viscus that may have produced or prolonged the disease. He prefers the gamboge, given in four or five grain doses, triturated with the same quantity of some aromatic powder, and a few grains of the crystals of the super-tartrate of potash. In urgent cases the dose of gamboge may be increased to ten or twelve grains, to be repeated, should the patient's strength admit of it, once in four or five days. This practice, he states, is generally borne better in ascites than in hydrothorax, and is sometimes inadmissible in ascites, where, from some affection of the mesentery or viscera, there occurs a tendency to diarrhœa which is often distressing.

As diuretics, he relies almost entirely upon the dried squill and digitalis, given in small doses, namely, rather less than a grain of the former, and only the sixth part of a grain of digitalis, administered every third or fourth hour. These apparently small portions he pronounces, from extensive experience, to possess all the efficacy of the largest doses, and none of their danger. To render them still more diuretic, he recommends a third or half grain of calomel every night, together with an infusion of dandelion, or some other diuretic decoction, *ad libitum*, as a common drink. He must not, however, be mistaken as recommending among these that popular beverage, gin punch, which he says, though it sometimes assists in carrying off the water, yet tends to perpetuate the remote causes of the effusion. The same observation we think applicable to most other diuretics.

He condemns the use of barks and other tonics so popularly employed in some dropsical affections, and cautions young practitioners against the error into which they are apt to fall, of estimating the degree of danger in anasarca, and the necessity of active treatment, by the single consideration of the extent of the œdematous swelling, and of treating it accordingly. "For this disease," says he, "when idiopathic, and arising from cold, although highly formidable in appearance, from the very considerable degree of œdema, is, when properly treated, of little account when compared with some of the other forms of the disease; and in many cases, the more considerable are the swellings, the more secure will be the important cavities from being implicated in the affection; since the effusion will be the more likely to have served as a remedy to its cause."

The operation of tapping Dr. A. regards as a necessary evil. The chief objections he urges to its employment are, the danger incurred where there is much visceral disease, of its causing a destructive form of inflammation in the peritoneum; with the probability of its occasioning, under the most favourable condition of the disease, a more rapid renewal of the serous accumulation. He therefore thinks that the operation should never be resorted to until the most ample trial has been made of all the various means regarded as useful for the

removal of the water and its causes, and where, from the failure of such means, the accumulation has occasioned a pressure upwards, threatening serious disturbance to the breathing, with other bad consequences. When the operation becomes indispensable, he premises it by giving a few grains of gamboge, or some other drastic purgative, the day before, which he thinks will serve to lessen the tendency to serous inflammation in the peritoneum. "Six hours after the operation, a few leeches should be applied to the abdomen, and a small blister on each side of it, and repeated as early again as the condition of the skin will allow. At the same time the several remedies in use previous to the tapping should be continued, &c."

The value of Dr. Ayre's book is enhanced by the subjoined cases, some of which detail the morbid appearances observed after death, whilst others demonstrate the permanent success which has attended the treatment he advises in hydrothorax, ovarian, and other forms of dropsy. G. E.

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XIX. *Napoléon a Sainte-Hélène. Opinion d'un Médecin sur la Maladie de l'Empereur Napoléon et sur la Cause de sa Mort, offerte à son fils au jour de sa majorité.*

Par J. HERCAU, Ancien Chirurgien ordinaire de Madame Mère et Premier Chirurgien de l'Impératrice Marie-Louise. Paris, 1829, pp. 228, 8vo.

The work, whose title we have just given, has excited no inconsiderable interest, as well on the continent of Europe as in Great Britain, and has been the subject of the most contradictory opinions. The continental writers, and particularly those of France, yield implicit confidence in the facts and deductions of the author, whilst in England, on the contrary, he has been decried as having been instigated by party or selfish views, and as being rather a factious and designing politician than a sound medical writer. This discrepancy of sentiment might however have been anticipated, on the ground of national prejudice and hereditary antipathy, as well as personal feelings towards Napoleon, which it has been impossible for either party wholly to lay aside.

Of the conduct of the British government in consigning the Emperor Napoleon to a prison on a distant and unhealthy island, we do not deem this a proper occasion to speak: but that the whole tenor of conduct pursued towards him, had a strong tendency to shorten his days, must be allowed by the most strenuous advocate of their policy.

The event of his death is of too recent occurrence, for any one to forget the sensation it occasioned, and the numerous reports and surmises this intelligence excited amongst all classes of society. Since that time the press has been unusually prolific in accounts of his life and decease, from the voluminous and fascinating work of the great Scottish novelist, down to the mere pamphlet of the hour, all of which differ in a greater or less degree in their details. This might reasonably be expected, when even the official reports of the physicians who attended him from the time he gave himself up to Captain Maitland, until his final release from vexation and suffering, are so extremely contradictory and unsatisfactory as scarcely to be reconcilable with each other.

M. Hercau is however of opinion, from the position he occupied in the family of the emperor, the numerous and friendly relations he always enjoyed

with those physicians and officers who had been constantly with him at all times and in all climates, and more particularly with the individuals most in his confidence while at St. Helena, that he is peculiarly well fitted to solve all doubts, rectify all errors, and to make known many circumstances hitherto unrevealed. This is certainly promising much, but we think that he has been successful in redeeming his pledge in a considerable degree, and with more impartiality than we anticipated on first taking up the work. That he is biassed by both his political and medical doctrines, cannot be denied; the work, however, displays considerable research and industry, and is valuable as affording a condensed view of the progress and termination of an insidious, but fatal disorder, with the effects of medical treatment on it, as well as an historical record.

Not wishing to extend this article beyond all due limits, we shall endeavour as succinctly as possible, to give an analysis of each of the chapters of M. Hereau's treatise, accompanied by a few observations.

Chap. 1st. Was the emperor poisoned? That such was supposed to be the case by great numbers of persons both in Europe and this country, before and even after the official accounts of his disease were promulgated, is a fact well known. M. Hereau acknowledges that he partook of this opinion for some time, but abandoned it on investigating the matter more closely. He gives an extraordinary anecdote respecting Napoleon's intention of committing suicide by means of poison, which he carried about his person for a length of time. With all due deference to our author, and the authority from whom he derived his information, this account appears to us to be highly improbable, and much on a par with that of his attempting to put an end to his life at Fontainebleau in 1814.

Chap. 2d. Is the disease of which it is asserted the emperor died, hereditary in his family? This malady, was a cancerous condition of the stomach, and it was supposed to have been hereditary; this latter idea was derived from the emperor himself, as he mentioned to his attending physician, that his father had fallen a victim to cancer of the pylorus. These circumstances are most strenuously and ingeniously combated by M. Hereau. He observes, that it is incontestibly proved, that none of Napoleon's immediate ancestors fell victims to this complaint, with the exception of his father, and that even his case admits of considerable doubts. That the emperor bore but little resemblance in character or constitution to his father, whilst, on the contrary, the similarity in these respects between him and his mother was astonishingly great. To the above may be added the fact, that none of the rest of the family have ever been affected with any symptoms of this painful and fatal disease. The only complaints from which Napoleon appears to have suffered, previous to his confinement at St. Helena, were dysuria and cutaneous affections; from the first of these he often experienced considerable inconvenience, so much so indeed as to be firmly persuaded, that, like Peter the Great, he would ultimately fall a victim to its violence. Of the cutaneous eruptions, one was the itch, which he contracted at the siege of Toulon, from using the rammer of an artilleryman, affected with this complaint, who was killed near him; the other was a leprous eruption which attacked him, in common with many of his troops, whilst in Egypt; this was cured by the use of vapour baths, but again took place during the time he commanded the army of Italy; it suddenly disappeared during



the campaign of Wagram, in consequence of which he was attacked with fever and other symptoms of a suppressed cutaneous disease of long standing. This disease finally made its appearance with increased violence whilst he was at St. Helena. We have mentioned these circumstances, as it has been asserted that the disease in his stomach arose in a great measure from a suppression of these eruptions.

Chap. 3d. Was the influence of the climate sufficient to occasion the disease of which the emperor died? M. Hereau is of opinion, in common with a great number of others, that the climate of St. Helena had a decidedly prejudicial effect on the health of Napoleon, and adduces many reasons for this assertion. In fact, all the writers who have described his residence at Longwood, agree that its situation, (to say the least,) was ill chosen, being continually subject to fogs and tempests; this is conceded even by those who have given the most favourable views of the island. The emperor was not the only sufferer from the effects of the climate, as almost all his attendants were attacked, in a greater or less degree with acute and chronic inflammations of the intestines, and the sickness and mortality among the troops were very great. This unpleasant state of the weather, and the restrictions imposed on him, occasioned a great disinclination in Bonaparte to take such exercise, as from his former habits of activity and exertion, was absolutely necessary to his health. M. Hereau appears to be firmly convinced that this place was chosen by the British government on account of its insalubrity, in order slowly but surely to put an end to his existence; this idea we know was also held by Napoleon himself; but from all the accounts of the island which had hitherto been given by travellers, it is but reasonable to believe the declaration of Lord Keith, that St. Helena was selected for its locality and its general advantages, as a place from which escape was almost impossible. Had they wished him to have been speedily carried off by an unhealthy climate, many spots better suited for the purpose, could have been selected, from which an attempt at escape would have been fruitless.

Chap. 4th. Had the restrictions and treatment to which the emperor was subjected, any effect on his disease and death?

We pass over the first of these subjects without other remark, than our perfect concurrence with the author, that they must necessarily have exercised a baneful effect on Napoleon's health.

With regard to the disease of which he died, and the medical treatment to which he was subjected, as well as the opinions of different physicians, it is no easy task to arrive at a clear understanding, from the extreme discrepancy of sentiments entertained by these gentlemen. M. Hereau gives an analysis of their reports at some length, accompanied by some very severe, and we are sorry to say, in many instances, merited censures on their diagnosis and subsequent treatment. We shall follow our author in this analysis in as few words as possible, leaving our readers to draw their own conclusions, premising however that M. Hereau is a strenuous and zealous advocate of the physiological school of medicine, and of course views what he terms the perturbing practice in great abhorrence.

It appears that towards the end of July, 1816, ten months after Bonaparte's removal from the Briers to Longwood, he first began to complain of an uneasy feeling in his stomach and right side, this state of things continued alternately

better and worse until September when symptoms of scurvy were superadded to them, and in November he was attacked with œdema of the feet and legs, with engorgement of the lymphatic glands in the groin. These symptoms, with occasional head-aches and diarrhœas continued until October, 1817, without his submitting to any regular course of treatment; about this time, Mr. O'Meara suspected that his liver was affected, and prescribed purgatives, which were taken, but without producing any good effect, as the disease increased in violence until the time of this gentleman's dismissal by Sir H. Lowe, in July, 1818; on his arrival in Europe, his account of the emperor's complaint was submitted to a consultation of physicians at Rome, who also decided that the disease was obstruction of the liver, with a scorbutic diathesis; the same opinion was entertained by Dr. Stokoe, who attended Napoleon after the departure of Mr. O'Meara. In September, 1819, M. Antommarchi, sent out by Cardinal Fesch, with the permission of the British government, arrived at St. Helena, fully convinced that the emperor was affected with hepatitis; this idea he thought was fully borne out by the symptoms he observed on visiting his patient, and a course of treatment was followed to combat this disorder, consisting of purgatives, &c. without producing any good effect, but on the contrary, appearing to aggravate the disease until April, 1821, when Dr. Arnott, after a careful examination, affirmed that the liver was not the seat of disease, but that it was located in the stomach. Napoleon himself was fully impressed with the opinion that such was the case, and often requested that an examination should be made after his death, in order to verify the fact. The malady continued growing worse until the 5th of May, when death ensued.

Such, in a few words, was the progress of the disorder, and from an attentive review of the journals of symptoms kept by the different medical attendants, M. Hereau is decidedly of opinion that the complaint was a chronic gastritis, kept up and aggravated by the treatment pursued, which consisted of tonics, bitters, purgatives, ethereal syrups, and stimulating embrocations. A careful perusal of these journals, will, we are convinced, lead every unprejudiced reader to much the same conclusions. In fact, the whole train of symptoms most clearly demonstrated that the stomach was seriously and organically diseased, and we cannot help feeling some degree of astonishment, that a plan of treatment, which by their own accounts, was, to say the least of it, manifestly ineffectual, should have been persevered in to the last.

Chap. 5th. Reflections on the examination of the body of the Emperor?

Here, extraordinary as it may appear, there is a strange diversity of sentiment among the physicians who made the examination; they all agree, however, that the intestines and peritoneum displayed evident marks of inflammation, and that the stomach itself was ulcerated to a considerable extent, whilst the liver was comparatively in a sound state. M. Hereau is firmly of opinion, that this ulceration of the stomach was not of a cancerous character, but the natural result of a gastritis, kept up and aggravated by an erroneous method of treating it. His arguments on this point are extremely ingenious, and deserving of attention, but we have extended this notice too much to attempt to follow them.

According to one report, that of M. Antommarchi, the lungs, stomach, peritoneum, bladder, &c. were each in a state of morbid organization, sufficient to have occasioned death; whilst the other, on the contrary, declares that the sto-

mach was the great seat of the evil, and that the rest of the abdominal viscera were in a sound state.

In conclusion M. Hereau comes to the following results.

1st. That the emperor was not poisoned, as was generally supposed.

2d. That the disease of which he died was evidently chronic gastritis, a disease which has never been considered as hereditary; whilst the traces of inflammation on the stomach left by this disease have been most erroneously confounded with a cancerous affection.

3d. That not only the influence of the climate was sufficient to occasion the disease of which he died, but that it had so completely altered his constitution that this event was almost inevitable.

4th. That the vexations to which he was subjected under the title of restrictions, and above all, the errors of his physicians, hastened his death.

M. Hereau finishes by declaring it to be his decided opinion, that Napoleon's early death was owing to his being confined in an unhealthy island, aided by bad treatment from his physicians, and worse from the governor. R. E. G.

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XX. *Recherches Anatomiques et Physiologiques sur les cas d'uterus double et de Superfetation.* Par A. L. CASSAN. Paris, 1826. pp. 84.

The author of the present little work has been at much labour to collect all the well-authenticated cases of double uterus, from which he has fully established the fact of their existence. The analogy of animals that present a similar formation, is stated, and from the observation of a great number of facts, the development of this peculiar conformation is thus detailed. "At the end of the sixteenth week, two small vermiform bodies are observed in the lumbar region; at a little more advanced period these two symmetrical parts approach and unite in the median line of the body and form the uterus and vagina." The philosophical views of MM. Geoffroy, Neckel, and Serres, receive additional confirmation from these cases. Every variety of partition of the uterus is noticed, from a partial division of the uterus by a membranous partition, to the complete separation of the uterus and vagina. These anomalies in organization appear to consist in the suspension of development before the two parts are united, or in persistence of development after their union.

The consequences of such configuration of parts are stated to be important in the first place to a state of pregnancy: a woman may become pregnant, be delivered of a child, and yet not cease to be a virgin; she may at the same time be pregnant and be in labour. 2d. As it regards menstruation, the author denies that the empty lobe would menstruate when the other contains a fœtus. 3d. It would explain some of the accidents which attend difficult labours, as when the partition of the uterus was horizontal, dividing the uterus into an upper and lower chamber, the partition must be torn through, or the uterus lacerated, this happened in two cases related by Drs. West and Olivier. 4th. As it regards superfetation. The fact of a second conception being possible during the gestation of a first, is established by numerous cases cited by the author, and the only rational mode of explaining it is afforded by a reference of such cases to a double uterus. This little work will well repay the trouble of a perusal, as it abounds with interesting observations on a subject of philosophical inquiry.

J. M. P.



XXI. *Illustrations of the Diseases of the Breast, (Female.)* By Sir ASTLEY COOPER, Bart., F. R. S., Sergeant Surgeon to his Majesty, &c. &c. In two parts. Part 1st, pages 89, quarto. Plates IX. London, 1829.

The very just distinction which Sir Astley Cooper has obtained by his success as an operator, and his contributions to the store of professional knowledge, together with his enduring and well-founded reputation, dispose us to receive from him, with peculiar pleasure, a work on so important a subject; and especially as we have the conviction of its deductions and statements being well guarded by a thorough and extensive experience.

The text of this work is very neatly printed, and as stated in our caption, occupies eighty-nine pages quarto. It consists in general descriptions of the diseases treated of, their methods of cure, and narratives of individual cases coming under the notice of the learned author. To the text is appended a fasciculus of nine plates, each one containing several figures illustrating the cases. These figures are very beautifully and carefully coloured, so as to reach as exact a representation as possible of their originals. They are upon the whole highly creditable to this department of British pathology, and we trust a token that it will not be permitted to languish, in that state of inaction, to which it seems to have been condemned for some years past.

The contents of part the first are—The effects of common inflammation in the Breast—Hydatid Disease—Chronic Mammary Tumour—Cartilaginous and Ossific Tumour—Adipose Tumour—Large and Pendulous Breast—Scrofulous Swelling of the Breast—Irritable Tumour of the Breast—Ecchymosis of the Breast.

In common inflammation of the breast, Sir Astley gives a decided preference to purging by repeated doses of castor oil or sulphate of magnesia. He recommends, however, the occasional application of leeches. Phlebotomy does not enter into his list of remedies; he indeed does not even mention it. In the adhesive stage, to prevent suppuration, he recommends as a local application, spirit of wine, an ounce, to five ounces of water, or the liquor plumbi dilutus. When suppuration has occurred, the application should then be fomentations of poppy decoction, or poultices of the same.

Among the causes of this complaint, Sir Astley ranks strong drinks, and the detention of the child from the breast. By the first, the mother is unduly stimulated, and by the last, the breast is kept in a state of irritation, by being permitted to remain full of a secretion, which would act as a useful aperient to the infant.

When suppuration follows in spite of the remedies used, if the abscess be seated superficially and the symptoms are not very severe, it is best to wait for a spontaneous opening for the discharge of the matter; but if the purulent focus be deep, and the local and general symptoms protracted and very painful, then the lancet should be used.

For the induration of the bosom which follows mammary abscess, Sir A. recommends the application of iodine ointment, or the emplastrum ammoniac cum hydrarg.

In regard to hydatids, our author speaks of four species, of which one only is malignant. Extirpation of the mammae is the general remedy, though some

cases may be treated successfully by puncturing the cyst and causing an adhesion of its sides. In the instance of Lady Hewitt, whose breast was successfully excised, it had reached the enormous weight of nine pounds.

Chronic mammary tumour is by no means an unfrequent affection, as is well known to surgeons. It is recognised by being hard, superficial, devoid of pain, and of every other mark of irritation, and of a very slow growth. It consists of small lobules of fibrous matter surrounded by a sac of the same, and springs from the condensed cellular substance holding the lobules of the gland together.

Sir Astley's experience is that of others, to wit, that such tumours remain indolent for years, and then disappear. He does not recommend extirpation, as it is useless. As a discutient he recommends iodine ointment, or the emplastr. ammoniac. cum hydrarg. When such tumours occur in virgins, they are frequently cured by the first pregnancy and the subsequent nursing. W. E. H.

XXII. *Journal of the Philadelphia College of Pharmacy.* Edited by BENJAMIN ELLIS, M. D. Professor of Materia Medica and Pharmacy in the College, &c. Assisted by a publishing committee, consisting of D. B. SMITH, C. ELLIS, S. P. GRIFFITHS, Jr. and G. B. WOOD, M. D. Professor of Chemistry in the College, &c. Published by the College. Philadelphia, 1829, Nos. 1 and 2.

It is with no inconsiderable pleasure that we are called upon to notice the valuable publication now before us, alike creditable to the institution from which it emanates, and to the learned contributors whose labours fill its pages. Few institutions are calculated to be of more real utility than a well-conducted College of Pharmacy, and we feel some pride that our city should have been the first in this country to establish one. Of the good effects it has already produced, all who have attended to the state and progress of pharmacy here, will bear ample testimony, and we trust that ere long no druggist or apothecary will receive any support from public confidence who is not connected with this establishment.

Soon after its organization, the college made arrangements for the publication of a journal to be devoted to pharmaceutical researches: this undertaking was entrusted to a committee, with directions to issue a number whenever a sufficient quantity of matter should be presented.

In consequence, four numbers were published at long and irregular intervals, but the work was at last discontinued from various causes, the principal of which arose from a deficiency of original matter. The college, however, deeming that the wants of society and the profession demand a medium, by means of which knowledge of a valuable and important character should be widely disseminated, have again commenced the publication of a Journal, to appear quarterly, on a more comprehensive scale than their former undertaking, as it is now to embrace original and selected essays on all the branches of science connected with pharmacy.

The numbers now before us consist of original communications from different members of the college, and a variety of valuable articles selected from foreign journals. To enable our readers to judge for themselves of the nature and importance of the work, we will give a short analysis of them without further comment.

The first paper is on *Copaiba*, by Elias Durand. The author, after giving

the natural history of this oleo-resin, discusses its properties and preparations. Copaiba he says, "seems to be composed of an essential oil forming about one-half of its weight, a resin, a small quantity of acid possessing the characters of acetic acid, a fatty matter, traces of muriate of lime, and of a sweet substance." Its specific gravity differs according to its fluidity; it has generally been fixed at 0.950; some tried by Mr. Durand was of nearly the same density as water; it requires twenty-five times its weight of alcohol at 35° of Baumé's areometer to effect a perfectly transparent solution, but leaving a residuum; it wholly dissolves in pure alcohol, ether or the essential oils. When mixed with one-seventeenth of pure magnesia, it acquires a degree of solidity sufficient to allow it to be formed into pills. This mixture requires six or eight hours to thicken, and gradually becomes still more solid, with an increase of specific gravity to 1059. No other article, except perfectly pure magnesia, will accomplish this solidification. The other alkalis form saponaceous compounds, resembling gum Arabic, and capable of being suspended in water. This effect of the alkalis was proposed by the School of Pharmacy at Paris as a test of the purity of the article. The essential oil is obtainable by distillation. This oil is an excellent solvent of caoutchouc. Potassium is not affected by it. The resin, when reduced to dryness, is tasteless and inodorous; its medicinal properties are more than doubtful. As is observed by Mr. Durand, the disgusting taste of this valuable medicine has been a source of great annoyance to both patients and physicians. The essential oil has been used in France with great success; it has also been tried in this city with equally happy results: the best forms to exhibit it are those given by its introducer, M. Dublanc, Jr. *R. Syr. Tolutani*, ℥ij.; *Aqua menth. pip.*; *Spirit ol. essen. cop. aa.* ℥iij.; *Ext. opii. gr. i.*; *M. Dose* from three to six table-spoonsful a day. Or *ol. essen. cop.* ℥ij.; *Pulv. gum acac.* ℥ss.; *Aqua cinnam.* ℥ij.; *Syr. simp.* ℥iss.; *tinct. opii.* ℥ss.; *M. Dose* a table-spoonful.

The copaiba, solidified by its union with magnesia, is also a valuable preparation, and free from the sickening taste of the fluid article. It is highly spoken of by several practitioners.

Art. 2. Observations on Opium and some of its constituents, by Edward Staples, M. D. This paper is principally on morphia and narcotine. After some remarks on the extractive principle, Dr. Staples says that he succeeded nearly two years since in obtaining morphia in a crystalline form, and in an almost pure state, by immediate precipitation from a combined acetic and alcoholic solution; this was published in our cotemporary, the North American Medical and Surgical Journal. He now gives the process more at length; and we are sorry that our limits will not permit us to transfer it to our pages. By the plan proposed by our author, he says, many of the difficulties hitherto attendant on its preparation are obviated, and that a little skill, and an apparatus of a very humble order, will enable persons to prepare this salt. Opium of a very superior quality thus treated, afforded ℥xv. of morphia. M. Robiquet only obtains ℥vij. from a Paris pound, and Mr. Brande ℥viiij. from a carefully prepared specimen of English opium.

Next follow the minutes of the College, from which we shall only make the following extract. "The Philadelphia College of Pharmacy has now been in existence for more than eight years; during that period it has with slender



funds, and through many discouraging circumstances, affected more for the improvement of American Pharmacy, than all that has before been done or attempted in this country. It has produced union and concert, a more liberal spirit, and more elevated views among the apothecaries of Philadelphia; it has had the honour of establishing the first school of pharmacy which this country has seen; it has established the first, and only journal devoted exclusively to the science and art of the profession; it has resolved a company of shopkeepers into a scientific association; the inspiring influence of which we are just beginning to feel, &c."

The miscellany, being principally composed of extracts from foreign journals, we shall pass it over. At the close of the number we perceive that the college held an examination on the 15th and 16th of April, at which seven candidates presented their theses, and underwent a scrutiny as to their acquirements.

No. 2, contains eight original communications; the first of which is Observations on the Protoxide of Mercury, and the Atonic weight of that Metal, by Samuel Allinson, Jr. We find it no easy task to analyze this paper from the close connection one part of it bears to another. It has been considered as an established chemical fact, that there were two distinct oxides of mercury, the black and the red, but recent experiments seem to render it probable that the former is only a mixture of the latter with metallic mercury. Mr. Allinson says, if the experiments which he has performed with much care are correct, that the common idea, that the black oxide is composed of one atom of oxygen and one of mercury, and the red oxide of an additional atom of oxygen, must be abandoned; for either the red oxide is a combination of atom to atom, or the theory of binary compounds is infringed in an important particular, namely, that they are of more difficult decomposition than the ternary. Our author observes that there is a great difference of colour, and most probably of chemical composition, in the article kept by different apothecaries under the name of the black or protoxide of mercury, as it varies from a brownish-red to a light lead colour. He prefers preparing it by precipitating it by means of pure caustic potash, or lime water from the proto-nitrate. Mr. Allinson states that he is indebted to Thomas Evans for an interesting and important fact respecting calomel. "That when an alkaline solution is poured on calomel, however often the latter may have beenedulcorated, to remove corrosive sublimate, a reddish powder is at first apparent." This shows the fallacy of one of the reputed tests of that salt.

Art. 2d. Remarks on the preparations of iodine and their compounds, from the inaugural thesis of W. R. Fisher. The author of this paper urges the absolute necessity of the adoption of some certain formulæ in the preparation and use of this article and its compounds. The paper displays considerable research and judicious selection, but is of a nature which will not allow of our giving an analysis of it.

Art. 3d. Remarks on the Bi-carbonate of Soda, from the inaugural thesis of Franklin R. Smith. By the modes of preparing this salt as directed by the pharmacopœias, a sesqui instead of a bi-carbonate is formed. The process pursued to obtain it in this city being different from that of the colleges, or from any mentioned in chemical authors, induced Mr. Smith to examine the article. The mode of forming it here is by placing the common carbonate of soda "in a box

contrived for the purpose, and surrounded by an atmosphere of carbonic acid gas under pressure. The salt absorbs the gas, and as the new compound combines with less water than was contained in the old, a considerable quantity of fluid drains off." This plan presents many advantages, care must however be taken that the salt be exposed a sufficient time to the action of the gas, or it will not be equally saturated. In fact, in specimens examined, Mr. Smith has found a portion of carbonate mechanically retained. For preparing the bi-carbonate the French carbonate is preferred.

Art. 4th. Remarks on Quercia, a new substance discovered in the bark of *Quercus falcata*; from the inaugural thesis of Joseph Scattergood. This gentleman has obtained a peculiar salt from the barks of our native oaks, to which he has given the title of Quercia. This salt is inodorous, tasteless, and entirely insoluble in ether, alcohol, or water either hot or cold. It appears to have more analogy to the earths than the alkalies in some respects, but differs from them in forming insoluble compounds with the mineral, and not combining with the vegetable acids. The quantity obtained from the bark is very great, being as high as seventy grains from four drachms. From the experiments detailed in the thesis it appears that four hundred grains of Spanish oak bark is composed of tannin, forty grains; gallic acid, twenty-six; oily and resinous matter, ten; extractive, six; quercia, seventy; woody fibre, two hundred and forty-eight. Quercia and its salts, from their insolubility, are not likely to prove of much medicinal importance. Mr. S. has taken upwards of ten grains, without its producing any effect, and one drachm of the sulphate was administered to a dog without its having any perceptible action on him.

Art. 5. Remarks on the preparation of blue mass, by Elias Durand. Struck with the great imperfection of this preparation, as it is generally to be met with, Mr. Durand instituted, some years since, a course of experiments with the view of discovering some substance which would at once extinguish the mineral, and prevent the hardening and alteration of the mass. He ultimately found that honey fulfilled these indications in a great measure. This substance is objected to in the American Dispensatory, as producing griping, but this objection Mr. D. does not think as valid, as the quantity of honey is too small to interfere with the ordinary action of the medicine. This preparation possesses the advantage of keeping for years in a proper consistence for forming pills. It is made with mercury, four parts; inert vegetable powder, (liquorice or marsh mallow root is preferable to starch,) three parts; gum Arabic, one part; liquid honey, four parts. Mix the gum with half of the honey, and to this add the mercury. Triturate without intermission, if possible, until no globules are perceptible, then add the other ingredients. Each three grains of this preparation contains one of mercury.

Art 6th. On the non-existence of oxide of mercury in blue pill and blue ointment, by Samuel Allinson, Jr. The author of this paper confirms the idea now held, that these preparations are composed of mercury in an extremely comminuted form, combined with conserves or lard, and not of an oxide of mercury. This fact is generally admitted in France, though it is denied in the British and American Dispensatories. It completely overturns the long-established maxim, that metallic mercury is perfectly inert when internally used.

Art. 7th. An analytic memoir on Tobacco; by Columbus C. Conwell, M. D.

The peculiar principle of tobacco is termed nicotia; it is tasteless, inodorous, uncrystallizable, and destructible by heat. It is insoluble in water and alcohol, and combines with the acids, forming nearly insoluble salts. Its great peculiarity is that of striking a red or light claret colour with all the acids. The essential oil appears to contain all the virulent energies of the plant. Dr. Conwell states that starch does not exist in the pure Virginia leaf, at least it cannot be detected by means of iodine; Vauquelin, however, asserts that he has found it.

The number terminates with selected articles; these, in our opinion, are of a more practically useful character than those given in the first. The college as a body, very wisely disclaims any responsibility for the opinions and statements communicated in the Journal; in this they are perfectly right, but we think that it would be advantageous and useful if the editors should prefix their opinion to any papers which they may conceive as containing erroneous or improper doctrines, for although the college and the editors may not hold themselves responsible for the facts and assertions given in their Journal, still, as they appear under the sanction of their name, it will always be considered that they deem them valuable and trustworthy, by giving them an insertion on the pages of their publication.

Since writing the above, we are happy to see that our brethren in New York are fully aware of the utility of a pharmaceutical college, and are about establishing one on much the same principles as that in Philadelphia. We augur much good to the science from their united labours, as tending to give certainty and efficiency to one of the most important branches of the healing art.

R. E. G.

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XXIII. *Elements of Medical Statistics, containing the substance of the Gulstonian Lectures, delivered at the Royal College of Physicians. With numerous additions, illustrative of the comparative salubrity, longevity, mortality, and prevalence of diseases in the principal countries and cities of the civilized world.* By F. BISSET HAWKINS, M. D. of Exeter College, Oxford; Fellow of the Royal College of Physicians, and Physician to the Westminster General Dispensary, London, 1829, pp. 234, 8vo.

This is a valuable collection of statistical matter, comprehending a more extensive view of the subject than any work we have yet seen. Reports, essays, and other documents relating to various countries, towns, and hospitals, are here brought together, which if left detached, would perhaps have been overlooked, or excited but little attention. Collectively, however, they afford data for curious investigation, enabling us to estimate the influence of the moral and physical causes which operate upon man in the various countries and stations of society, to compare the value or duration of life in ancient and modern times, to ascertain the relative healthiness or insalubrity of countries and cities at the present day, and the results proceeding from the influence of civilization and the various efforts made towards the improvement of health.

Among the positions which Dr. Hawkins regards as established are, a general extension of the average duration of life in modern times throughout Europe, every succeeding ten years, apparently producing a smaller annual proportion



of deaths; the superior salubrity and inferior mortality of all descriptions of the population of Great Britain compared with that of other countries; the great diminution in the proportion of deaths in general, and more particularly in lying-in and foundling hospitals; the less disposition of his countrymen to commit suicide than any other people that have attained a similar grade of civilization.

The only source to which Dr. H. appears to have applied himself for information relative to this country, is the statement made by Drs. Niles, jr. and Russ, put forth at New York, in 1827.\* This publication, which professes to be "A Comparative View of the Mortality, in New York, Philadelphia, Baltimore, and Boston," does great injustice to Philadelphia, the annual mortality of which, for the entire city, is represented to be in the proportion of 1 death for every 31 inhabitants, the highest rate exhibited by any of the above-mentioned cities. The correction of this statement may be found in this Journal, where it is shown that on an average of many years, the deaths per annum of the entire population, is about the proportion of 1 to 50.8.†

Persons who undertake such investigations, should be intimately acquainted with all the circumstances which may exert an influence upon their calculations, and be capable of impartially weighing and making fair allowances for them. A knowledge of the manner in which the city and county of Philadelphia are divided for municipal purposes, would have doubtless prevented Drs. Niles and Russ from committing an error in relation to the proportional mortality of this city, which places it in a very unfavourable light in the pages of Dr. Hawkins.

In the comparison instituted between the results of fever treated by art, with those of fever consigned to nature, we think Dr. H. has formed improper conclusions. He brings forward on this occasion the frank avowal made by Hippocrates in his book of epidemics, where he acknowledges, that out of forty-two cases of acute disease, in which no active treatment appears to have been adopted, half of them died. This statement Dr. H. compares with the returns of the London Fever Hospital, where the total mortality, (in 1825,) was only one in seven, and of the Dublin and Edinburgh hospitals, in which the rate is still lower, being only about one in twelve. "We perceive," says Dr. H. after this, "that one out of two acute cases may recover by the almost unassisted efforts of nature, but that under the medical protection of our own age and country, six out of seven, or even eleven out of twelve are likely to survive." In forming this conclusion, has Dr. H. duly estimated the difference of circumstances which operated on the occasions alluded to? Has he taken into consideration that the cases recorded by Hippocrates, instead of being such as are of ordinary occurrence, were in all probability dependent upon a pestilential constitution, similar to what we still occasionally find producing diseases of such malignancy as to render unavailing all the curative efforts which can be interposed at the present day? Whatever degree of conviction we may entertain of the greater efficacy of modern practice, we would still reject the test here offered by Dr. Hawkins.

We condense from the treatise under notice the following interesting statistical facts in relation to the probabilities of life at different periods of the world; the mortality of hospitals, &c.

\* Dr. H. has converted the name of Dr. Russ into Rush.

† See first number, (1827,) article Medical Statistics of Philadelphia.

*The probabilities of life* among the Roman citizens in the third century of the Christian era, calculated from documents furnished by Domitius Ulpianus, (Berard, Discours sur les Améliorations, &c. &c.) were as follows:—

From birth to 20 years of age, 30 years—from 20 to 25, 28 years—from 25 to 30, 25 years—from 30 to 35, 22 years—from 35 to 40, 20 years—from 40 to 45, 18 years—from 45 to 50, 13 years—from 50 to 55, 9 years—from 55 to 60, 7 years—from 60 to 65, 5 years.

In England, during the last forty years, the estimates of Finlayson makes the probability of life, at 20 years of age, 40 years—at 40, he allows 29—at 50, as many as 22—whilst at 60, he admits 15.

The same calculator has fixed upon 37 years as the mean duration of life in Britain, reckoning from 1695; but if the estimate be made from 1789, he makes it above 52 years.

*Proportional Mortality of Countries, Cities, &c.*—In the middle of the last century, the annual mortality of London was 1 in 20, whilst in 1821 it was ascertained to be 1 in 40, so that, in the space of 70 years, the chances of existence appear to be exactly doubled.

The annual deaths throughout England and Wales have been reckoned at 1 in 60 of the population.

The average mortality of Glasgow, from 1801 to 1826, is 1 in 44.41.

In France the annual deaths in 1781, were 1 in 29 for the whole population; in 1802, they were 1 in 30; in 1823, they were 1 in 40. In Paris, about the middle of the last century, the mortality was about 1 in 25; at present it is about 1 in 32.

In the Pays de Vaud, considered the most healthy part of France, the annual mortality is stated at 1 in 49 inhabitants.

In Sweden the annual deaths from 1775 to 1795, were in the proportion of 1 in 37; in 1823 the mortality had diminished to 1 in 48.

In Berlin the annual mortality was 1 in 28 from 1747 to 1755; but less than 1 in 34 from 1816 to 1822. For the whole of Prussia the mortality is about 1 in 35. Madrid loses 1 in 29; Rome, 1 in 25; Amsterdam, 1 in 24; Vienna, 1 in 22½; Geneva, 1 in 43; Naples, 1 in 28¼; Leghorn, 1 in 35.

It is generally calculated that the 20th part of every population is labouring under illness, and that the 100th part has some severe disease.

In France it has been estimated that about half the children born, live to 20 years, and about a third to 45. The lowest annual mortality is at the age of 10, when it is only 1 in 130. At the age of 40 it is 1 in 53. The probability of life to a man of 43 is 23 years. The mortality is greatest among the poor, and least with the affluent.

During the 8 years, from 1816 to 1823, the mean height of young men fit for military duty, was found to be in Paris 5 feet 2 inches and 1½ lines, whilst in the suburbs of Sceaux and St. Denis, it was only 5 feet 1 inch and 9½ lines.

The mean average of deaths for the whole kingdom of Holland is by a late estimate 1 in 48.

The annual deaths throughout Russia appear at present to be 1 in 41 inhabitants; in St. Petersburg alone, 1 in 37.

In the Venitian provinces the mortality is estimated at 1 in 28 per annum.

*Mortality of Hospitals.*—The annual mortality of St. Thomas's Hospital, Lon-

don, was, during the 10 years intervening between 1803 and 1813, so low as 1 in 16. The average during the 50 years, from 1764 to 1813, was 1 in 15. The average deaths of the physicians cases during 10 years were 1 in 9. Number of in-patients cured and discharged in 1827, 3151; out-patients, 9343; deaths, 259; remaining under care, 879; total, 13,632.

St. Bartholomew's Hospital, London, reported for 1827, as cured and discharged 4916 in-patients, 4318 out-patients, and 3173 casualty patients, in all 12,407; deaths, 350; remaining under care, 960; whole number of patients during the year, 13,367.

The two reports of St. George's Hospital, London, for 1825 and 1827, give a mortality of 1 in 9. The great mortality of this establishment is attributed to the closeness of the wards.

In the Provincial Hospitals the mortality is less, as it is generally found to be in other countries. The rate of mortality in the public institutions of Dublin and Edinburgh is lower. That of the Bath United Hospital is still less, being in 1827 only 1 in 20. During the same year out of 271 patients received under the surgeons care, 16 died, or about 1 in 17.

The mortality of the Fever Hospital in Dublin, has gradually and steadily diminished of late years; from 1804 and 1812 it was 1 in 12; from the last period to 1814 it was 1 in 15; and in 1815 it was only 1 in 20.

The deaths in the Edinburgh Royal Infirmary, on an average of the 10 years previous to 1818, was 1 in 16 of all admitted.

The hospitals of Paris received and treated during the year 1822, 47,343 individuals. The hospices afforded refuge to 13,216. The administration supported 19,557 deserted children. The mortality in the hospitals, classing all together, was 1 in 8.42. The daily expense of each patient was one franc, seventy-six centimes, in the hospitals, and only about eighty-four centimes fifty-eight dixièmes in the hospices. The mortality of the Hôtel Dieu was, in 1822, 1 in 6.82 of the whole number admitted, of which about 1 in 6½ were medical, and 1 in 12 surgical cases.

In the Charité, the mortality is 1 in 5.53.

The mortality of the Hôtel Dieu at Lyons, is about 1 in 11. At Montpellier the average of all the institutions is about 1 in 10.

In Berlin, the mortality of the great general hospital, the Charité, for the 20 years preceding 1817, was about 1 in 6.

The great general hospital in Vienna presents a mortality of about 1 in 6. The total number of beds is about 2000, contained in 111 rooms.

At Pesth, the present capital of Hungary, the annual deaths at the Civil Hospital were, in 1826, 1 in 6.

At the City Hospital in Dresden, the deaths in 1816 were 1 in 7.

In the hospital at Munich, one of the most modern and best regulated, the report of 1819 affords only 1 death in 9, of above 3500 patients, the lowest mortality of any hospital of the same dimensions in Germany. The mortality of the hospitals of the small towns in Germany, is often one-half, or even one-third of those situated in the great cities.

The annual average of deaths at the Imperial Hospital for the sick poor, at St. Petersburg, has been for 14 years, ending in 1817, so high as 1 in 4½, the greatest proportion of any general hospital of the same extent, at the same pe-



riod. The sick were most numerous in April and May, September and October. In the year 1816, the in-patients at the above hospital amounted to 2043, of whom 461 died; the out-patients were 26,968, of whom 4072 died. There were 32 operations for the stone here in 1817, of which there were 12 deaths.

The mortality in the Hospital of St. Pierre, at Brussels, was, in 1823, 1 in 9 for the adult patients.

At Milan, the mortality of the great hospital was, in 1823, 1 in 7. The number of patients treated in that year, was 13,278.

In Pavia, the total mortality of the Hospital of San Matteo della Pieta, in 1823, was about 10 per cent. The total number treated in the year was 5287. Of these, 42 were brought in moribund. There were 120 surgical operations, the deaths in which department were about 6 per cent.

The annual average mortality of the hospital at Leghorn, from 1818 to 1825, was about 1 in 7.

In Madrid, according to the best information to be obtained, the two principal hospitals had, in the year 1818, 14,500 patients, but what proportion of these were out-patients is not known. The whole amount of deaths was 1283.

*Statistics of Lying-in Hospitals, and of the Still-born.*—In 1750, at the British Lying-in Hospital of London, 1 woman died out of 42; in 1780, only 1 died in 60; and finally, in the 10 years between 1789 and 1798, only one case was fatal out of 288. The proportion of still-born at this last mentioned period was about 1 in 25, and of women having twins 1 to 84. In 1750, 1 child died out of 15; in 1780, 1 in 44; and in the ten years between 1789 and 1798 only 1 in 77.

The mortality at the Lying-in Hospital in Paris was formerly much greater than that of the London hospital at the same period. In 1822, it had, however, diminished so that only 1 died out of 30, which it will be observed is still more than double the mortality of the London institution, where, in 1826, there only died 1 in 70. The average stay of each female admitted into the Paris hospital was about 22 days.

In the Dublin hospital there were, in 1822, only 12 deaths out of 2675 women delivered. The following is the official report of the results observed there during nearly 70 years, viz. from its origin in 1757 to 1825:—

Proportion of males and females born, about 12 males to 11 females.

———— of children dying in the hospital, about 1 to 19.

———— of children still-born, about 1 to 17.

———— of women having twins, (and more,) about 1 to 60.

———— of women dying in child-bed, 1 to 89.

———— of women having three and four children, about 1 to 4000.

The mortality at the Edinburgh Lying-in Hospital is about 1 in 100.

The deaths at the Lying-in Hospital at Stockholm were, in 1822, 1 in 29; about the same as in Paris. In 472 deliveries there were 11 cases of twins, 1 triplet, and 36 still-born. Of the 21 deaths of mothers, 16 were from puerperal fever.

At Berlin, a beneficial change has taken place, similar to what has been observed in London and Paris. From 1796 to 1806, one lying-in woman died out of 32 received into the Charité Hospital at Berlin; whilst in the ensuing 10 years, from 1807 to 1817, only 1 fatal case occurred in 45.

The average fatality attendant upon pregnancy throughout the whole king-

dom of Prussia, has been ascertained and published under the authority and sanction of government. According to this estimate, which embraces all ranks of society, 1 mother died in that country out of 112.

*Still-born.*—It appears that 1 infant out of 32 is still-born in Prussia; in Hanover about 1 in 30.

The variations which occur in the proportions of still-born are difficult to explain. In the middle of the last century, 1 out of 25 births were still-born, and at the very same time at Strasburgh 1 in 8. In this last named city, the proportion is now less, although it still remains greater than elsewhere, being at present 1 in  $12\frac{1}{2}$  of all the births. In Sweden and Finland, on the contrary, it is only 1 in 40. Generally speaking the still-born are more frequent in towns than in the country, and more common amongst the poorer than the affluent classes.

At Stutgard it has been remarked that the number of still-born increases nearly in the proportion of the illegitimate births, and it may be added that of the legitimate children in Prussia, only 2 out of 10 die in the first year, but 3 in 11 of the illegitimate.

At Berlin, the proportion of still-born has continued nearly the same for the last 50 years. At present it is 1 in  $19\frac{1}{2}$ . According to Caspar, the rate in some other cities is, London and Vienna, 1 in 24; Paris and Dresden, 1 in 19; Hamburgh, 1 in 15.

The proportion of abortions and still-births in Europe is far greater among single than married women. In the *Hôpital des Vénériens*, at Paris, 2 children out of 7 are dead-born, and in a similar establishment at Hamburgh, the proportion is 1 in 3. At Göttingen, only three per cent. of the legitimate children are still-born, but as many as fifteen per cent. of those born out of wedlock.

G. E.

XXIV. *Observations on the Nature and Treatment of Cholera and on the Pathology of the Mucous Membranes.* By ALEXANDER TURNBULL CHRISTIE, M. D. Madras Medical Establishment, and lately in Medical Charge of the Civil Department in the Southern Mahratta Country. Edinburgh, 1828, pp. 137, 8vo.

The extensive and fatal prevalence of cholera, a few years since, in India, where it is said to have destroyed six millions of human beings in less than seven years, has rendered the disease a subject of great interest, and demanded the especial attention of the medical officers attached to the British government in that country to an investigation of its nature and treatment. Their researches have furnished us with an accurate history of the progress of the disease—minute descriptions of its symptoms—accounts of various modes of treatment—and details of its frightful mortality—but they yield little towards a satisfactory illustration of its pathology, or a rational mode of cure. The observations of Dr. Christie afford much interesting information on these two latter points, and though his pathology is not perfectly correct, nor his therapeutics, at least in all parts, in strict harmony with it; still the former approaches nearer the truth, and the latter has fewer discrepancies and is less empirical than those of other English writers on the subject. We therefore believe that we are performing an accept-

able service to the profession, in laying before them a sketch of this publication.

From observing that in every case, the mucous tissues, from the very commencement of the attack, bore the principal onus of the disease, Dr. C. was led to infer that it was in these that we must look for its pathological cause; and therefore, to elucidate the subject of cholera more fully, he has prefixed to his essay, some general remarks on the pathology of these membranes.

Dr. C. commences by observing that "in almost every texture, disease, however much it may vary in its progress and termination, is, with few exceptions, ushered in by inflammation," and he attempts to prove, that "the mucous system affords a remarkable exception to this general rule," and "that in addition to inflammation it is liable to another simple morbid affection, viz. catarrh, which often occurs alone, without being accompanied, or having been preceded by inflammation." Inflammation he considers to be "owing to some affection of the capillary vessels which connect the extreme arterics with the veins," and evinced by one or more of the following signs, viz.: increased heat, pain, redness, and swelling; catarrh, as consisting in "a diseased action of the secretory apparatus of a mucous membrane, which produces an increased and vitiated secretion, and is characterized by the membrane in which it occurs, being generally whiter than natural, and by the quantity of blood towards the surface of the body being diminished." Our author, we may add, is of opinion, that "either of these morbid affections may occur alone in a mucous membrane, or conjoined with the other," and that "some medicines produce an inflammation, others a catarrhal action, in mucous membranes;" "a long continued action of certain medicines produce the former, while a short continued action of the same medicines produces the latter effect."

To prove which, Dr. C. is in error, in supposing, that what he calls catarrh of the mucous membranes, is not an inflammatory state; it is only necessary to notice some of the physiological characters of these tissues, and to trace the progress of inflammation in them.

The mucous membranes in a healthy state, are constantly moistened by a sero-mucous fluid secreted by vessels opening on their free surface, and most of these tissues, as the gastro-intestinal, contain follicles or cryptæ which pour out a mucous fluid.

If a moderate irritant be applied to a mucous membrane, the first effect is an increased flow of blood to the part; this of course produces redness and tumefaction, also increased heat, and if the part is well supplied with nerves of sensation, its unnatural condition produces a feeling of uneasiness or pain, and we have those symptoms which Dr. C. considers as constituting inflammation. This state is however generally of very brief duration, being speedily followed by an increased secretion from the exhalent vessels and cryptæ; and the engorgment is thus relieved, and the redness, increased heat, tumefaction, and pain ceases. If the irritant is removed, the determination of blood to the part ceasing, the secretions diminish, and the part is restored to its normal condition. If the increased flow of blood is kept up by the continuance of the irritant, the secretions continue profuse, and if the irritant is sufficiently powerful or long enough continued, the secretions are not only increased in quantity but



altered in quality—in addition to the serous part of the blood, fibrine is also poured out, and we have that state which Dr. C. has called the catarrhal. When the quantity of the secreted fluids is less in proportion than the quantity of blood thrown into the tissue, we have redness, tumefaction, &c. or that condition of things which Dr. C. considers as inflammation united with catarrh. Should the irritation be still more violent, we may have in addition to the serous and fibrinous portions of the blood, the red particles also thrown out, or a true hæmorrhage. When the irritation is still more violent, the secretions become suppressed, the blood accumulates, and hence follows redness, tumefaction, heat and pain; a state of things which exists at the commencement of inflammation of the skin, muscles, and of those tissues, in which the increased quantity of blood determined to the irritated part cannot be got rid of by the increase of a natural secretion and the balance thus preserved, and which continues until relieved by the establishment of some artificial secretion, as by that of pus, or by the other terminations of inflammation.

The observations and experiments of Dr. Christie, amply confirm this sketch of the progress of inflammation in the mucous tissues; and he has been led into the error of supposing that catarrh is not an inflammatory state, by his belief that heat, redness, tumefaction, and pain are essential concomitants of the latter. This, however, is taking but a very limited view of inflammation. It is restricting this affection to certain phenomena which are only some of its effects, and excluding others which do not less belong to it. An increased and deranged secretion is as much an evidence of the existence of inflammation in mucous tissues, as redness, pain, tumefaction, and heat are of its presence in the skin, muscles, &c.

It is somewhat singular that Dr. C. should assert, as he does correctly, that “in catarrh, the action of the excretory vessels of a mucous membrane is increased,” and yet deny that it is an inflammatory state. His knowledge of this fact should have led him to inquire into the correctness of his notions respecting the essential characters of inflammation.

Dr. C. lays great stress on the preternatural whiteness of the mucous membranes in catarrh, as proving that this state is not an inflammatory one; this proof will, however, fail him. When the gastro-intestinal mucous membrane is coated with the mucus and fibrine secreted in cholera, that membrane of course appears whiter than natural; but if this covering, which adheres with considerable tenacity, is carefully removed by washing, the membrane will often be found preternaturally red. Generally, moreover, where the disease has continued for some length of time, the membrane becomes thickened by effusion of coagulable lymph, one of the common effects of inflammation, and it appears from this cause unnaturally white.

We now proceed to prove, by the evidence afforded by Dr. C. that cholera is produced by a change in the gastro-intestinal mucous membrane, such as we have described. Dr. C. produced artificial cholera repeatedly, in dogs, by irritating substances introduced into their stomachs; and a young Mahomedan, who took too large a dose of *Croton tiglium*, which occasioned hyper-catharsis, exhibited so perfectly all the symptoms of cholera, viz. muco-serous evacuations, scarcely perceptible pulse, cold extremities, contracted features, &c. that Dr. C. until it was explained to him, supposed that it was an attack of genuine cholera.

Dr. C. further states that "the morbid appearances that are *invariably* met with in cholera are confined to the mucous system; those observed in other systems being only occasional. In all the dissections I have made, the following appearances have been present. A whitish, opaque, viscid substance was found adhering to the surface of some portions of the mucous membranes; and in many cases it was so abundant in the intestines as completely to fill parts of them of a greater or smaller extent. The stomach and portions of the intestines were filled with a transparent or turbid serous fluid; and, frequently, the viscid matter mentioned above was found intimately mixed with the serous fluid, or floating in it in the form of flakes. The mucous membranes, (except when inflamed,) had an unnatural whiteness; were frequently soft and pulpy; and in general, (especially in the stomach and small intestines,) could be easily detached by scraping, in the form of a thick pulp, from the subjacent coat. These appearances were sometimes more or less partial; but some of them were generally found throughout the whole extent of the alimentary canal. They extended, in some cases, to the mucous membrane of the bladder and uterus; and were found, in two or three instances, in the pulmonary mucous membrane.

"Many cases have been related, in which the secretion from the gastro-enteric mucous membrane exhibited appearances different from those mentioned above. It has been met with of a dark gray or green colour, sometimes bloody, and occasionally of the consistence and colour of cream. It has been shown by Mr. Annesley that the dark gray and green colours are owing to the chemical action of calomel and bile on the cholera secretion; and they cannot be considered, therefore, as constituting separate varieties of the secretion. The creamy matter I have met with in two or three cases; and in these it had very much the appearance of pus. The bloody variety I have never seen. It is very rare; and probably arises from accidental circumstances.

"The morbid appearances that have been found next in frequency to those already mentioned, are, venous congestion in the viscera, particularly in those of the abdomen; dark-coloured blood in the veins, and sometimes in the left side of the heart; and inflammation in some part of the mucous membranes. I have generally found inflammation, (when present at all,) confined to the pyloric extremity of the stomach and small intestines. I have also met with many cases in which no inflammation could be detected."

From a careful examination of the cholera secretion, procured from the stomach and intestines of several individuals that died of the disease, Dr. C. found it to consist of two portions, one a transparent serous fluid; the other an opaque white coagulum. Chemical analysis showed the first to be pure serum, and the second *fibrin*. This is an extremely interesting fact, for which we feel much indebted to Dr. Christie; it is confirmatory of our pathology, this secretion depending essentially upon inflammatory action.

That the disordered state of the mucous membrane is not a partial occurrence, but is invariably present in cholera, is a fact, says Dr. C. that rests on the best evidence.

"Many cases," he adds, "have been recorded in which we find it stated, that on examination no morbid appearances could be detected. But, *in these cases, were the mucous membranes carefully examined?* From what has been stated in a former page, *we have every reason to suspect they were not.* Even if they were carefully

examined, and no morbid appearances could be discovered, we are not the less certain that their *functions* were disordered during life; for of this the copious morbid secretions thrown off by vomiting and stool, afford a sufficient proof. It is stated in case eighth in the Bengal Report on the Epidemic Cholera, that no morbid appearances could be discovered on dissection; yet even supposing this dissection to have been made with the greatest care, it is perfectly evident that there was great functional derangement of the gastro-enteric mucous membrane during life; for the most prominent symptoms were frequent vomiting and purging.

"The catarrhal affection has its seat generally, I think, in the stomach and small intestines; and in almost all severe and protracted cases, it appears to pervade every mucous membrane of the body. The stomach is certainly most obnoxious to the disease; and I have met with no case in which it was free from it. I imagine that the mucous membrane of the air passages is not *always* affected; but it frequently is so, and perhaps invariably in severe cases.

"For some time, believing the stomach and intestines to be the only seats of the disease, I unfortunately overlooked the condition of the pulmonary mucous membrane; and since my attention has been directed towards the latter, I have had it in my power, only two or three times, to ascertain the state of that membrane by dissection. The first of the cases alluded to was that of an old man, a convinct, who died of cholera after an illness of about ten hours. The symptoms were frequent watery purging, collapsed features, gradual diminution in the size of the pulse, coldness of the extremities, and difficulty of breathing. Having been attacked with the disease during the night, and not having reported his illness till the morning, the remedies came too late, and the disease proved fatal. The usual morbid appearances were found in the gastro-enteric mucous membrane, with little venous congestion in the abdomen, and no inflammation. The trachea was lined with a thickish mucus; and the minute branches of the bronchia were completely filled with a white froth. The second case being in many respects extremely interesting, and the dissection having been made with great care in the presence of a medical friend, I will relate it in detail.

"15th June, 1826.—Anomah, male convict, aged 20, was brought into hospital about half past five, P. M. from Moogud, a village about five miles from Darwar.

"6, P. M.—It is reported that he vomited and was purged two or three times early this morning; but he himself positively asserts that he neither vomited nor was purged. When interrogated, he complains of nothing but slight pains in his limbs. His intellect is perfectly clear; and although he is weak, he has a perfect command over all his voluntary muscles. Features considerably collapsed; pulse not perceptible at the wrist or temples; no perspiration on any part of the body; hands and feet cold; tongue coated, whitish, and moist. *Sumat statim submur. hydrarg. ʒi. et superbibat tincturæ cardamomi, ʒi. in paululo aquæ tepidæ. Admoveantur sinapismi pedibus et cruribus, emplastrum epispasticum forte abdomini et arena calida brachiis.*

"7, P. M.—Has taken two doses of the calomel and tincture of cardamoms. Says he feels a little better. Skin colder since last report. Features much collapsed. Complains of slight pain in his knees, and of pain from the cata-



plasms. Answers all questions most distinctly. Sumat submur. hydrargyr. gr. v. necnon tinct. cardamom, Zijj. in paululo aquae tepidae quaque semihora.

"9, P. M.—Has taken four doses of the calomel and tincture of cardamoms. Is restless, and complains of thirst. Pain in the umbilical region on pressure. Pain in his knees continues. Skin cold, with a slight cold perspiration. No pulse at the wrist or temples. Continuantur remedia.

"10, P. M.—Has coughed up a quantity of white froth. In other respects the same.

"He died about midnight; and the body was examined at six o'clock of the following morning.

"*Abdomen*.—Stomach distended, with its external surface natural. Small intestines considerably distended, and of a purplish colour. Large intestines, in some places distended, in others much contracted, with their external surface natural. The stomach contained a large quantity of whitish muddy fluid. Its mucous coat was lined with a white coagulum, and exhibited a blush of red near the pylorus. The duodenum contained a large quantity of a white turbid serum, and a large lumbricus: its mucous coat was of a white colour, and was lined with a whitish mucus throughout its whole extent. The jejunum and ileum contained a large quantity of serous fluid, mixed with flakes of a white coagulum. Their mucous membrane had a light vermilion colour, and was lined with a white coagulum. The large intestines contained a considerable quantity of turbid serous fluid. The mucous membrane of the cæcum, and greater part of the colon, had a reddish colour, and was lined with a diaphanous mucus. The lower part of the colon and rectum were healthy. The liver was healthy in its structure, with more blood than usual in its veins. The gall-bladder contained healthy, and somewhat inspissated bile. The urinary bladder was healthy.

"*Thorax*.—Heart natural. Blood dark coloured. Structure of the lungs healthy. A quantity of white froth was found in the trachea. *The bronchia were filled with a white froth, and a large quantity of a gray serous fluid mixed with white flakes.*

"*Encephalon*.—Considerable congestion in all the meningeal veins. All the contents of the cranium were, in other respects, healthy."

The skin frequently participates in the diseased action of the mucous membranes; in many cases being covered with a cold clammy sweat, or with profuse perspiration. "There is sometimes a copious perspiration, when the pulse at the wrist is extremely small, or altogether imperceptible. This has generally been considered as indicative of extreme debility of the cuticular perspiratory vessels. On the other hand, I am inclined to think, that these vessels have their action very much increased; for were the reverse the case, how does it happen that, when only a small quantity of blood flows sluggishly, or in drops, from a large orifice made in a vein, or even when no blood can be procured, the cuticular secretion forces its way through the minute pores in the skin? It is easily conceivable how debility of the perspiratory vessels can occasion increased perspiration when the superficial arteries, which are immediately behind them act with vigour; but when these arteries do not contain a sufficient quantity of blood to enable them to continue their own action, the only way in which perspiration can be thrown out is evidently by an increased action of the

perspiratory vessels. But perspiration is by no means an invariable symptom of cholera; for, in some cases, there is only a slight moisture about the face and hands; and, in others, the whole skin is perfectly dry.

The symptoms of cholera are well described in most of the systematic treatises, and are familiar to the profession; and the ratio symptomaticum suggests itself after understanding the true pathology of the disease; we shall not, therefore, devote any time to these subjects, but proceed at once to the treatment.

Cholera consisting in secretory inflammation of the gastro-intestinal mucous membrane, with great determination of blood to this part, the indication is to subdue the increased action of the secretory vessels, and to restore the balance of the circulation.

Blood-letting is generally admitted to be one of the most powerful remedies we possess to effect these indications, and Dr. C. thinks that it is even more extensively applicable than is usually supposed. He conceives "that it is not only indicated in the case of the robust and plethoric European, but also in that of the most delicate native. It ought not only to be put in practice in cases accompanied by increased action of the circulation, but even in every case when blood can be obtained, however much its quantity may have been diminished towards the surface; except only in those cases in which there had been great debility previous to the attack of the disease."

The *modus operandi* of blood-letting is too evident to require explanation.

To restore the circulation to the surface, and thus relieve the internal vessels, the utility of stimulants applied to the external parts of the body readily suggests itself.

Blisters and sinapisms Dr. C. ranks among the most beneficial, and certainly the safest remedies in cholera. He generally applies "a strong cantharides plaster to the abdomen, and sometimes to the chest; cataplasms of mustard and capsicums to the feet and legs; and hot sand, or friction, to the arms and hands. It is, I think, only in extreme cases that we ought to have recourse to boiling water or acid, for the purpose of raising a blister; for, when there is sufficient time to admit of a blister being raised by means of a plaster, the constant stimulus which it keeps up appears to be more effectual in occasioning a steady determination towards the surface than the sudden and violent stimulus of either of the former. However, in two or three almost hopeless cases, I have seen the boiling water blister attended with the most favourable results. One of these was the case of a native woman in Darwar, who had been ill the greater part of the night. Her friends did not apply to me for medicines till nine o'clock in the morning. She then had no pulse at her wrist; her features were collapsed, and her skin cold. I ordered the boiling water to be applied immediately to the abdomen, and that she should have a little tincture of capsicums in some warm water. This was done. The circulation returned to the surface; and before the evening she was free from the disease."

By far the most difficult part of the treatment, Dr. C. considers to be the management of external stimulants. This difficulty, we think, may be readily obviated by abandoning their use, or restricting them to the very last stage of the disease, where the circulation threatens to stop, and the powers of life appear to be failing. Opium, of course, forms an exception to this restriction, it being useful by its sedative powers. The morphia should always be pre-

ferred to the crude opium. Most of the stimulants that have been used in cholera, Dr. C. thinks, *when judiciously employed*, may be productive of benefit, but admits that there can be no doubt of their often having done harm.

"The action of general stimulants," he says, "may be considered under two points of view; first, in regard to their effects on the gastro-enteric mucous membrane; secondly, in regard to their general effects on the system. The latter, from being the most manifest, have almost always obtained the greatest share of attention: but they are not always the most important; for, it is not improbable, that they are often merely symptomatic of the former. In most cases of cholera we must principally attend to the former; the first indication of cure being to restore the healthy action of the gastro-enteric mucous membrane.

"Opium has been almost invariably extolled in the treatment of cholera. The primary effect of opium is that of a diffusible stimulant. It also diminishes irritability, represses the secretions, and moderates inordinate actions. These properties point it out as a medicine well adapted to the catarrhal form of cholera. The objects we ought to propose to ourselves in its administration, are, to suppress the vomiting and purging; to diminish the depraved secretions of the mucous membranes; to alleviate spasms, and to assist in restoring the circulation of the blood towards the surface. In the inflammatory cholera it is only admissible for the purpose of allaying the vomiting; for, if continued beyond this, it would tend to increase the inflammation. Cases in which there is only catarrh of the mucous membranes, are those in which it may be used with the greatest freedom. Where inflammation is present, it must, of course, be employed with more caution. It ought, I conceive, never to be used solely for the purpose of removing spasms; for, spasms being merely symptomatic of the disease of the mucous membranes, they will most certainly cease when the latter is removed.

"Alcohol, æther, and the different stimulating tinctures, somewhat resemble opium in their general mode of action, excepting that their stimulus is more permanent. They are especially indicated in the latter stages of the disease, when they can be retained on the stomach, and when the quantity of blood is much diminished towards the surface. They are counter-indicated by pain and burning in any part of the abdomen, which they always aggravate.

"The aromatic and warm vegetable substances which have been employed in cholera, produce a slight inflammatory action on the gastro-enteric mucous membrane, and appear to exert little or no general influence on the system. They are clearly inadmissible, *except in the purely catarrhal form of the disease; and then they probably promote the cure, by repressing the increased secretion of the mucous membranes, by means of the inflammatory action they induce.* They may be used in combination with other remedies, such as alcohol, with calomel and purgatives; but, if given alone, I think it doubtful whether they would prove of any utility. Bitters are the most useful of the vegetable tonics that can be employed in cholera; for they generally possess an astringent property, whereby they repress the increased secretion of the stomach and intestines."

We have placed in Italics the very remarkable explanation offered by Dr. C. of the supposed good effects of aromatic and warm vegetable substances. That these articles increase the inflammation of the mucous membranes to such a de-



gree as often to suppress the secretions, is unquestionably correct; but how aggravating a disease can promote the cure, remains still to be explained. Astringents are essentially stimulants.

"Calomel," Dr. C. says, "is certainly one of the most extensively useful remedies we possess for the treatment of this as well as of various other tropical diseases. From what has been said of the action of calomel, in the first part of this essay, it might at first sight appear, that since *it increases the secretion* of the gastro-enteric mucous membrane, it will be inadmissible in the catarrhal form of cholera. But it must be remembered, that while it increases the secretion, it also restores it to a healthy condition. Accordingly, when cholera has been cured by calomel, the looseness to a certain extent continues; but then the evacuations are feculent, yellow, or of a dark colour. The combination of calomel and opium which has been so much extolled, appears to be a remedy admirably calculated for fulfilling the intentions of cure in the catarrhal form of cholera; for the requisite properties wanting in the one medicine are supplied by the other. Thus calomel keeps up a permanent stimulant effect on the system, which opium does not. Opium represses the abundant discharge from the gastro-enteric mucous membrane, while calomel corrects it. Lastly, calomel increases the peristaltic motion of the bowels, and thus effects the discharge of vitiated secretions, while opium relieves irritation.

"In the inflammatory form of cholera, calomel will act with greatest effect when given alone, or combined with a purgative; for our object, in this instance, *is to remove inflammation*, and to excite a healthy increased secretion in the mucous membrane of the primæ viæ. Even in the catarrhal form of the disease, where there is little or no peristaltic motion in the bowels, calomel may be beneficially combined with *stimulating cathartics*; for in such a case, when given without them, *it sometimes remains in the stomach and upper parts of the intestines, and there excites inflammation*. When given along with other remedies, warm cathartics are not likely to do harm. They occasion a healthy action in the secretory apparatus of the primæ viæ, and by exciting the peristaltic motion they cause the other medicines to pass along, and be applied to all parts of the gastro-enteric mucous membrane."

We have never met with more false or contradictory reasoning than is contained in the two preceding paragraphs. We are told that calomel "*increases the secretion*," and "opium *represses* the abundant discharges from the gastro-intenteric mucous membrane," and yet that the combination appears "admirably calculated for fulfilling the indications of cure in the catarrhal form of cholera!" Again, that the colomel "*sometimes remains in the stomach and upper parts of the intestines, and there excites inflammation*," and to prevent this "it may be beneficially combined with *stimulating cathartics*!"

Cold drinks, Dr. C. thinks are clearly counter-indicated in catarrhal cholera; "for there can be no doubt that cold always aggravates, and frequently excites, catarrh; and, moreover, we ought to endeavour, by every means in our power, to restore the natural temperature of the body."

This reasoning is fallacious; cold is a direct sedative, and cold drinks may be often given with advantage while warmth is applied externally. "There appears no reason," however, Dr. C. says, "for withholding tepid drinks from a patient labouring under cholera, and, in fact, their free use is strongly indicat-

ed by many of the symptoms of the disease. They will communicate warmth, diminish thirst, and tend to alleviate the different distressing sensations which may be referred to inflammation of the gastric mucous membrane."

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XXV. *Journal des Progrès des Sciences et Institutions Médicales en Europe, en Amérique, &c. Tome XII. Paris, 1828.*

This Journal, of which a volume, containing two hundred and eighty-eight pages, large octavo, is published every two months, was commenced in 1827. It is one of the most interesting of the foreign journals; and is particularly valuable for the information it affords relative to the medical literature of Germany and Italy, for the numerous facts it contains, and for its monographs, which are unusually complete.

Each volume is divided into six sections. The 1st is devoted to reviews of French and foreign medical publications; the 2d, to original monographs; 3d, to critical reviews of medical institutions; 4th, to a general repertory of facts, experiments, and observations; 5th, to necrological notices; and 6th, to critical bibliographs. The reviews are written with great candour and impartiality, and the monographs display much ability and research. The repertory, which is similar to our periscope, (except in the arrangement of the articles, which is alphabetical,) contains a very full summary of facts and observations, selected from the different journals of Europe and this country.

The volume we have before us contains ten reviews; the first is of Dr. Bonerden's Memoir on the Circulation; 2d, of Dr. Ware's Experiments on the Pneumogastric Nerves; 3d, of Dr. Broussais on Irritation; 4th, of Prout's Researches on Diabetes, &c. 5th, of Dr. Pennock's Observations and Experiments on the Modus Operandi of Cupping-glasses in Poisoned Wounds; 6th, of Dr. Rayer's Treatise on Diseases of the Skin, and Drs. Cazenave and Schedel's, and Dr. Plombe's works on the same subject; 7th, of Dr. Schœnsberg's Memoir on the establishment of the Circulation after the Ligature and Section of Arterial Trunks; 8th, Reflections on the Nature of Tetanus; 9th, of Blasius on the Pathogénie of Dropsies; 10th, of Rust on Spontaneous Luxation of the two first Cervical Vertebrae.

The original monographs are three:—1st. On the consecutive effects of punctured wounds on the circulation, by Dr. Leuret. 2d. Anatomy, physiology, and pathology of the spinal marrow, by M. Calmeil. 3d. On the progressive movements of man and animals, by Dr. Chabier.

Next there is in this volume a department headed clinical works, containing a case of accouchement which resulted fatally, in consequence of a fracture and subsequent deformity of the pelvis, related by Dr. Papavoine.

Medical institutions, the succeeding department, is usually a very interesting one; in the present number, however, we find only lists of the prizes offered by different medical societies.

The repertory comprises twenty-nine articles. The volume concludes with a few bibliographical notices, which are however rather meager.

We have frequently enriched our periscope by articles from this Journal, and our readers will find in that department, notices of the most interesting portion of the contents of the volume under notice.

## QUARTERLY PERISCOPE.

### FOREIGN INTELLIGENCE.

#### ANATOMY.

1. *Absence of the Thymus Gland.*—Dr. HARRINGTON relates in the *London Medical and Physical Journal*, for February last, a case in which the thymus gland was absent. It occurred in a male child, which at birth was healthy, active, and plump, and sucked strongly on being applied to the breast eight hours after being born. For the first twenty-six hours it remained remarkably tranquil and quiet, but at the end of this period began to moan and be restless, and afterwards passed several motions, which were fœtid and slimy, and contained small lumps of apparently feculent matter, and some coagulated blood. On the third day the dysenteric symptoms continued and the infant was also seized with convulsions. On the fourth day the state of the bowels continued nearly the same, and blood was passed with the urine. On the sixth day the child cried much for the first time, was very restless, had dry, red tongue and lips; hot skin, great thirst; taking any fluid ravenously from the spoon; urine high coloured and bloody; motions frequent, watery, yellow, and projected with much force. On the evening of the eighth day the child expired. On examination, several strictures were found in different parts of the intestinal tube, and the colon and rectum throughout presented the characters of intense inflammation. The liver was very large and congested with blood, as was also the right kidney. The remaining abdominal viscera were healthy. The heart and lungs were perfect. *No trace of a thymus gland could be discovered.*

2. *Zonula Zinnii in the Human Eye.* By Professor M. J. WEBER, of Bonn. —Anatomists have greatly differed as to the nature of this part of the eye. Thus Lieutaud, Cassebohm, Ferrein, &c. consider it as a continuation of the retina; Winslow, Zinn, Meckel, Hempel, Bock, and a majority of modern anatomists, as an appendage of the hyaloid membrane. Rudolphi asserts, that it is a distinct membrane; his opinion was adopted and sustained by Doellinger, and M. Weber also coincides in it. He has found that diluted nitric acid, which gives to the retina a yellowish tinge and greater thickness, does not produce those effects on the zonula; and, consequently, it is not a continuation of the retina: another fact which tends to the same conclusion is, that when the retina attains the external edge of the zonula, it can be separated from it without tearing; and, instead of confounding itself with the tissue of the zonula, its edge is reflected backwards and inwards towards the hyaloid. M. Weber has seen this reflection in the eyes of an infant of from two to three months old; and he thinks, that in more advanced age, this termination of the retina is effaced from the mutual adherence of the two lamellæ of the reflection. Finally, in the eyes of the subject the zonula was in an abnormal state, whilst the retina, vitreous body, hyaloid membrane, &c. were all in a normal condition. The zonula was in the form of a beautiful grayish-white, opaque ring; its external and



crenulated edge was dove-tailed in some degree with corresponding crenations in the retina, which formed the reflection spoken of above, to the extent of half a line.

Examined under a microscope of two hundred and twenty magnifying power, the zonula appeared to be formed of a medullary substance, which was almost homogeneous, with rudiments of globules; the arrangement of these elementary parts offered a rayed appearance, but without any distinct fibres. The retina was distinguishable from it by its greater thickness, and the absence of this radiated structure.—*Ferussac's Bulletin*, Nov. 1828.

3. *Anterior Termination of the Retina.*—Dr. Schneider, of Munich, has found that the retina does not terminate in an enlarged border, near the external edge of the ciliary body, as has generally been supposed, but that when it arrives at that point, it is continued without interruption towards the axis of the eye, and terminates near the crystalline by a free edge which is not attached to the crystalline capsule. This continuation of the retina is situated behind the ciliary body, and before the zonula zinnii. It forms a thin and delicate medullary lamina covered with pigmentum nigrum. This pigmentum is thinner and thinner as it approaches the crystalline, and is entirely wanting on the free edge. At the distance of two-thirds of a line from the crystalline, the retina again thickens, and assumes a very white colour, and appears to the naked eye like a flaky circle of about two-thirds of a line in width, presenting, at unequal distances, elevations and depressions to the number of seventy or seventy-five. The internal edge of this circle appears cut off, and is closely applied to the edge of the capsule of the crystalline. Under the microscope the small flakes have the appearance of conical bodies studded with minute elevations, resembling the nervous papillæ of the tongue. The structure of these different parts of the retina is perfectly identical.—*Ibid.*

## PHYSIOLOGY.

4. *On the supposed Existence of Active Molecules in Mineral Substances.* By ROBERT BAKEWELL, Esq.—In our last number, p. 200, we published a notice of the supposed discovery, by Mr. Brown, of active molecules in mineral substances. We felt well convinced at the time that there had been some error, being aware of the numerous ones to which microscopical researches are liable, and we are now happy to point out some interesting observations and experiments by Mr. Bakewell, which disprove this imagined discovery, and show some of the circumstances from which it probably originated. "I have made," says Mr. B. "repeated observations on several mineral substances, which Mr. Brown says are chiefly composed of these active molecules; and though in some instances I was at first persuaded that I had seen the motions of the molecules similar to those of the smallest species of Infusoria, a more careful examination proved that I was mistaken, and that the motions were derived from causes that had not been properly appreciated. In these experiments it is absolutely requisite to employ fresh distilled or fresh boiled water. The Thames water and water in cisterns generally contain numerous animalcules. I chiefly made use of single lenses from one-twelfth to one twenty-eighth of an inch focal length, varying in magnifying power, from 100 to 220 times in linear dimensions: the use of the compound microscope is, I think, inadmissible in such delicate observations. With the lowest of the above-mentioned powers, a particle less than one-twenty-thousandth part of an inch in diameter is distinctly perceptible, and the form of a particle of twice that diameter may be observed. To make use of higher powers than what are absolutely required, renders the examinations more difficult, and the result more uncertain.

"To obtain glass in a highly comminuted state, I took the powder-blue used

by laundresses, which I still further triturated. The small portion of the oxide of cobalt which enters into the composition of this glass, could not be supposed to paralyse the action of the molecules, as all the metals that can be reduced to powder are said to contain these active molecules.

“By making use of powder-blue, I had the advantage of seeing when all the larger particles were deposited. Among other substances which I more particularly examined, were finely powdered adhesive slate, mountain cork, quartz, flint, and kaolin, from a specimen of the best kind used in the manufacture at Sevres, given me by M. A. Brogniart. When a drop of water containing any of these substances was placed under the microscope, I perceived particles in motion, which continued for some time, and then was scarcely discernible, but on laying my hand upon the table the motion recommenced, and was evidently produced by a current in the drop; although many particles appeared to be more influenced by it than others, which occasioned a change in their relative positions. Hence I became convinced, that in order to make the experiment properly, the microscope should be placed on a support not liable to be affected by vibrations of any kind, and I therefore placed the instrument on a support made for a telescope stand, so constructed as to prevent vibration when examining the more delicate double stars. I found that even the pulsation of my body occasioned an oscillatory motion of the particles, when the microscope was placed upon a table. After repeated trials, I became satisfied that whatever motions may appear to take place among the particles, for some time after the drop of water is first placed under the microscope, they will soon subside, if not kept up by agitation from external causes. In London, as an excellent practical philosopher, the late William Nicholson justly observed, it is scarcely possible to avoid the effects of vibration; this may be seen by the continual tremors visible on the surface of mercury placed in a basin. Now, if the particles of dust that fall on the surface of the mercury could be brought under a powerful microscope, they would appear in constant motion. Let us suppose the mercury to be changed for water, a similar effect will take place, and the particles that may sink under the surface will represent the particles of dust in a single drop; and Mr. Brown informs us that the whole of the London dust is composed of active molecules. I am fully convinced, however, that their activity in a drop of water, as well as when dancing in the sun-beam, is derived from external agitation. The very force of gravity constantly drawing the particles downwards must not be overlooked, for it is not contended that the vitality of inorganic particles is sufficient to keep them permanently suspended in water. The observer's breath, and the constant evaporation of the drop, have also a tendency to produce counter-currents. A drop of water placed under the microscope, may be regarded as equal, in apparent magnitude, to a quart of the same fluid in a water-glass, and will be subject to the various currents that may be produced by agitation in the larger quantity; but the slightest movement which occasions a displacement of the particles, even the thousandth part of an inch will, under a high magnifying power, make them appear to perform a long voyage. Some of the animalcules discovered by L wenhoeck, the motions of which excited so much surprise, he informs us, never travelled farther than a hair's breadth.

“It is highly improbable that we shall ever be able to reduce mineral substances to their ultimate molecules by pulverization. Their essential qualities remain the same after pounding as before; and, could we construct microscopes that would magnify twenty thousand times in linear dimensions, we should see in pounded quartz, flint, &c. fragments and pebbles the size of walnuts, exactly resembling those of the same minerals at the foot of a mountain, and it is difficult to believe that they would gain active moving powers by simple immersion in water. Still the philosophical world is greatly indebted to Mr. Brown, for having directed the attention of naturalists to this curious subject. About ten years ago, I was informed that Mr. Bywater, an ingenious optician, now residing in Liverpool, had discovered moving animalcules in coal-ashes, pounded marble, and other mineral substances. Little interest was then excited by the sup-

posed discovery; it required an eminent naturalist, like Mr. Brown, whose merits are well known and highly appreciated in his own country, and on the continent, to direct public attention to statements so much at variance with our preconceived notions of matter. If, contrary to my expectation, after all due caution in the observations, it should be finally established that mineral substances are composed of active molecules, what new views of nature will the discovery unfold! Beds of siliceous sand, like those on our Hampstead Heath, are only awaiting a further process of trituration, to be awakened into life by the torrent that shall bear them into the ocean; and the geologist, while he contemplates the organic remains of a former world embedded in solid rocks, must regard the rocks themselves as the parents of future living beings. But who shall presume to say that we have at present discovered all the properties which the Creator has communicated to material substances? It should be borne in mind, that less than a century since, latent heat, electric and galvanic energy, and crystalline polarity were unknown as important agents in nature; and that philosophers attempted to explain the phenomena of thunder-storms, and even of vital action, on mechanical principles. It will not be denied that many important processes take place in the mineral kingdom, which cannot now be explained by the agency of known causes, but await the discovery of other principles for their satisfactory elucidation.

"As it is probable that many persons may be desirous of entering this new field of inquiry, it will materially assist them in forming an accurate judgment of what they observe, to provide pepper water, and other vegetable or animal infusions, that they may from time to time compare the motions of the real *Animalcula infusoria* with those of the supposed active molecules; and, if modern philosophy did not disdain to profit by the illustrations which common life frequently offers, I would recommend them to look attentively at the bubbles, or the crumbs that float on the surface of a basin of tea, and they will soon be convinced, that change of relative position is not a sufficient proof of spontaneous motion or vitality."—*Magazine of Natural History*, March, 1829.

5. *Case of Five Children at a Birth*, furnished by Dr. WEISS, and communicated to the Clinic by M. CARUS.—A woman, twenty-seven years of age, who had been married five years, of a middle stature and robust constitution, after having given birth to twins two years before, was put to bed with five children. The regular period of pregnancy was passed, and nothing in particular occurred, except that the woman felt herself more feeble than usual, with less inclination to eat or sleep. The abdomen had been very much distended, especially on the right side. The movements had been chiefly felt on the left side. The birth of the first child was very easy, and took place soon after the formation of the watery sac. The others came more slowly, and the last with much the most difficulty. Each was enclosed in a separate sac, and immediately followed by its particular placenta. All were born with the head presenting in the first position. The first that came were two boys, then a girl, next a boy, and then a second girl. Not one of them survived the third day. Their general length was from fifteen and a half to sixteen and a half inches. The second boy did not weigh two pounds after its death. Although all were regularly formed, they did not appear to have attained perfect maturity. With the boys, the umbilical cord was sixteen inches long, but only twelve with the girls; pulsation in it could scarcely be perceived at the moment of birth. The children had an old look; their voice was tremulous; they slept continually; and their temperature was very low. The mother, although very feeble, soon regained her health.—*Gemeinsame deutsche Zeitschrift für Geburtskunde*.

6. *Case of a child born with a Tumour of considerable size upon the Occiput, with Parencéphalocèle*. By M. BROUSSAUX, (Leger,) M.D.—A healthy young woman, on the 23d of August, 1824, gave birth to an infant with a tumour upon its occiput as large as its head. The development of the tumour was attributed to a contusion received by the mother upon the abdomen, in the first months



of pregnancy. The child lived fourteen hours, in a state of almost absolute insensibility and immobility. All the muscles depending upon cerebro-spinal influence were paralyzed; sucking was impossible, and deglutition could hardly be effected when milk was poured into the infant's mouth. The alvine evacuations took place naturally; the eyelids were constantly closed, and the ball of the eye remained immoveable; the pulse could be felt, though very feeble; the motion of the thorax in respiration was very slight. The tumour, which was nearly round, soft, opaque, and ulcerated in many places, presented a neck one inch in length and three in circumference; on grasping it, especially towards the cranium, a greater resistance was felt than in any other part.

The child died, when on opening the tumour, it discharged about four ounces of corrupted blood. On extending the opening, a tumour of a lively red was perceived, of the size of a turkey's egg, the opening of which gave exit to a considerable quantity of very thick black blood, and of three clots of the same colour and of the size of a hazle-nut. This second tumour communicated with the brain, through an opening situated behind the great occipital foramen. It gave passage to a portion of the medulla oblongata, six lines in length, which presented no signs of alteration either in colour or structure.

The meninges appeared to have been the seat of inflammation, as well as the cerebral substance itself. Each of the ventricles contained about a drachm of a sanious fluid.—*Revue Méd. December, 1828.*

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7. *Superfætation in a Double Uterus.*—A woman, pregnant for the seventh time, aborted in the fifth month. A dead fœtus, eight inches and a half long, was first expelled, then an embryo, supposed of three months, showing some signs of life, and three and a half inches in length. The two placenta were afterwards discharged one after the other. The midwife, after an attentive examination, found that the vagina and neck of the uterus were natural, but that beyond the exterior opening of the latter, were two orifices, each leading to a distinct uterus. This case is attested by Dr. Duges.—*Journal des Progrès, Vol. XIII. from the Emphémérides de Montpellier.*

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8. *Destruction of the Right Hemisphere of the Brain, with Hemiplegia of the left side, the Intellect unimpaired.*—In *La Lancette Française* there is related the case of a man aged thirty-two years, who died with the usual symptoms of phthisis pulmonalis, which, as well as disease of the heart, was ascertained by post mortem examination. The patient had also hemiplegia of the left side, and on opening the cranium, to seek the cause of this affection, it was perceived that a considerable mass of fluid was poured out between the brain and cranium. The hemisphere of the right side was wasted and reduced to a mere membrane; the cerebral substance had disappeared; the optic and olfactory nerves of the right side were shrunk, as were also the corpora olivaria and tubercula quadrigemina of the same side. The intellects of the patient were unimpaired.

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9. *Case of Anaesthesia or loss of Sensation, unattended with corresponding loss of Motion.* By ALEXANDER REID, Esq. Surgeon.—The following case is extremely interesting, as proving that the sentient principle may be annihilated, while that of motion may continue almost entire; thus furnishing strong evidence, in addition to that already collected, of the truth of the physiological doctrines of the double functions of the *medulla spinalis*, promulgated by Mr. C. Bell and others.

Mr. Walker, aged fifty-six, tall, and remarkably stout made, was a land-surveyor in Jamaica, where he resided twenty years. About the year 1802, he had a severe fall from his horse, which fractured some of his ribs, greatly injured his back bone, and rendered it necessary for him to be confined on his back for several weeks; and it was not until some time after the expiration of this period that he was able to walk about. He however recovered gradually, "and was at length able to attend to his business as formerly, although he felt at this time

a numbness commence in the right hip, and which extended down to the great toe of the same side of the body. Nearly two years afterwards he sprained the muscles of the back, situated over the lumbar vertebræ, while in the act of leaping a broad ditch. He could not move his body in the least degree, without causing him severe suffering in the affected part; and, upon his recovery, he found that the numbness of the right leg was rather increased, although he acknowledges that he felt but little inconvenience in going about his usual avocations from this circumstance.

"Nothing of interest happened him till the year 1812, when cold brought on an attack of erysipelas in his right leg and foot, and which afterwards affected his left leg also. Both legs at this period felt benumbed, and were insensible to the prick of a pin. His left foot became the weakest of the two, his limbs occasionally swelled, and were also covered with a disagreeable eruption. When he was in the warm bath, he could not say whether the water was cold or hot, until immersed above mid-thigh, even although his feet and legs were in this condition; and, to use his own words, 'felt as if covered with a stocking or boot, or as if sleeping.' He was, nevertheless, able to take proper exercise.

"In 1815, he was advised by his medical friends to try the effects of a sea voyage, and a residence in his native country. He arrived in Scotland about the beginning of July, when he felt both body and mind in a vigorous and healthy condition, with the exception of the want of feeling, which was still increasing throughout the body. After taking medical advice both in London and Edinburgh without receiving any benefit, he was obliged to go back to Jamaica on pressing business. After his arrival there he thought himself a little better. This amendment, however, was not permanent. He found the heat when exercising in the sun almost insupportable—quite different from what he formerly felt it. Unfortunately, he at this time jammed his right foot betwixt the gunnel of a boat and the ship's side, which bruised the foot, injured the metatarsal bone of the little toe, and brought on a troublesome sore. This circumstance was the cause of frequently laying him aside from taking his accustomed exercise in the open air, and which he conceived materially injured his general health. He again returned home in 1818 worse than when he left Scotland. In 1822 it was found absolutely necessary to remove the metatarsal bone, which had become carious and otherwise diseased, from its giving rise to repeated attacks of constitutional irritation. From the performance of this operation, productive of great suffering, Mr. Walker declared he felt not the smallest degree of pain, more than if it had been dead matter which had been operated upon. The sentient power is at present nearly, if not completely annihilated over the whole surface of the body; while the power of motion, although impaired, is yet so entire as to enable him to use his hands in carving his food, in writing, in holding the reins when on horseback, &c. He is also able to walk a short way, even without a staff. In answer to some queries which I put to him, he says, 'the want of feeling continued to increase slowly, and from my legs extended to my hands and arms, till I lost the feeling of finger after finger. The skin of my brow and head is also affected. I feel with nothing but my mouth, that is to say, I am incapable of telling whether any thing I touch is cold or hot, rough or smooth. I am generally speaking in possession of my ordinary functions. With regard to the sensation of my feet and hands, (and these I am at a loss to describe,) when cold, which they generally are, they feel heavy and stiff. When attacked with rheumatism, or when blistered from incautiously going too near the fire, an accident of which I am not conscious at the time, or when matter is gathering, they feel as if tight bound in a boot and very heavy, accompanied with restlessness and stretching all over the body. This was exactly the sensation produced by the collection of matter which so often took place from the diseased bone. I felt no pain whatever when you extracted the bone from my foot; nor would I now, I am convinced, were you to dissect the whole foot. When driving or riding, I cannot tell, unless I see, whether or not

I hold the reins or whip. My taste, smell, and hearing are perfectly entire. My sight is weak. Occasionally my eyes are slightly inflamed, and water a good deal. This I attribute to a difficulty which I have in shutting my eyelids from a want of perfect power in them. My feet and hands are to a certain extent paralyzed, that is to say, I have not the same power of motion in them which I had in a state of health, nor even a few years ago, when the want of feeling was nearly as great as it is at present.'

"In this interesting and singular case, Mr. Walker is a living instance of abolition of the sentient power, not only in the skin, but also in the deep-seated muscles, tendons, and ligaments, as was exemplified in the operation for the removal of the metatarsal bone, while the power of the nerves of the other external senses remain entire, and perform their functions in a perfect manner. The internal functions obey the will, and each one acts correctly under the influence of their peculiar stimulus as in a state of health; even the *sensorium commune* is fully adequate to carry on its intellectual operations in a very perfect degree. The motive power, which at first was little affected, appears now to be getting involved in the wreck of the sentient. The motions of the muscles of the eye, particularly the *orbicularis oculi*; of the *levator* muscles of the mouth; of the extensor muscles of the hands and fingers; and the extensors of the foot and toes, are imperfect; nevertheless they are to a limited extent still under the command of volition."—*Ed. Med. and Surg. Journ. April, 1829.*

10. *On the Physiological Effects of Oxygen Gas upon the Animal System.* By S. D. BROUGHTON, Esq.—Although it has long been known that the respiration of pure oxygen gas is destructive to life, some differences of opinion have existed with respect to the physiological conditions of the animals subjected to its influence; and also with regard to the quantity of oxygen consumed under these circumstances, compared with that consumed by the respiration of atmospheric air. With a view to elucidate some of these points, Mr. B. confined rabbits, Guinea-pigs, and sparrows, in glass jars, inverted over water containing oxygen gas, obtained from black oxide of manganese by a red heat. The animals at first appeared to suffer no inconvenience from the respiration of the gas; but after some time, (generally in about an hour,) their breathing became hurried, and their circulation accelerated. This state of excitement was followed by an opposite one of debility; the respirations became feeble, and were more slowly performed; loss of sensibility and of the power of voluntary motion gradually supervened, till the only remaining visible action was a slight one of the diaphragm, occurring at distant intervals. On opening the body under these circumstances, and also after the entire cessation of the movements of the diaphragm, the breast was found to be still in vigorous action; the blood in every part of the vascular system, both venous and arterial, was of a bright scarlet hue; it was remarkably thin, and rapidly coagulated; and the temperature of the body continued undiminished. If, before the diaphragm has ceased to act, the animal is removed from the vessel to the open air, it generally either recovers spontaneously, or its animation may be restored by artificially inflating the lungs with atmospheric air. Mr. B. found that the gas in which animals had thus been confined till they died, retains its power of rekindling a blown-out taper, and of sustaining for a time the life of another animal introduced into it; and he hence deduces the inference that it does not contain so great an excess of carbonic acid as the gas left when animals have perished by confinement in atmospheric air. He considers the train of symptoms induced by the respiration of pure oxygen gas as analogous to those which follow the absorption of certain poisons into the system.—*London Medical Gazette, May, 1829.*

11. *Silver found in the Viscera of a Person who had used the Nitrate of Silver.*—DR. WEDEMAYER, of Hanover, has published in *Rust's Repertorium*, the case of an individual who used the nitrate of silver internally, for the cure of epilepsy; the disease was removed, and the skin assumed a blue colour. The patient was



afterwards affected with disease of the liver and dropsy, of which he died. On post mortem examination, all the internal viscera were found more or less stained of a blue colour, similar to that of the external surface. The plexus choroides and pancreas were submitted to chemical examination by M. Brande, and a portion of metallic silver obtained.

12. *Functions of the Intestinal Canal and Liver in the Human Fœtus.*—"A very interesting paper on the above subject was lately read at the Royal Society by Dr. LEE. From the circumstances of the early development of the liver and intestines of the fœtus, of the copious supply of blood which they receive, and of the great space which they occupy in the abdomen, the author was led to the conclusion that they performed some important functions in the fetal economy. Although no nutritive matter can be furnished by the mouth, yet the contents of different portions of the alimentary canal were found, both in appearance and chemical composition, to have a striking analogy to those of the same parts of the canal in the adult, where the processes of assimilation and absorption are performed. A semi-fluid matter, possessing all the characters of albumen, is found closely adhering to the inner walls of the small intestine, and is more especially abundant around the papillary projection, through which the common duct of the liver opens into the duodenum, and diminishes in quantity as we trace it towards the termination of the ileum. The great intestines are generally distended with a dark green homogeneous fluid, containing no albumen, and apparently excrementitious. No albumen can be detected in the contents of the stomach: hence the author infers that an absorption of some nutritious substance, (which he brings forward several arguments to show must be derived from the liver,) takes place from the intestinal canal in the latter months of gestation. He states that in two instances he detected the presence of a substance similar to that which he had found in the duodenum, in the hepatic duct itself. Hence he is led to the conclusion that the function of the liver in the fœtus is not confined to the separation of excrementitious matter from the blood, but that it supplies materials subservient to nutrition. That the substances existing in the intestines of the fœtus are not derived from the mouth, is proved by these being equally found in encephalous children, or where the œsophagus is impervious, as where no such malformation had existed.

"A note is subjoined to this paper by Dr. Prout, giving an account of the mode by which he ascertained the chemical character of the substance referred to in his examination. The paper is accompanied by drawings of the intestinal tube in the fœtus."—*Philosophical Magazine.*

## PATHOLOGY.

13. *Case of Colica Pictorum.* By EDWARD BARCOME, Esq. With remarks by Staff-Surgeon DOYLE.—We present the following case solely for the purpose of enabling us to lay before our readers the very judicious remarks which are appended to it by Mr. Doyle. We would particularly request attention to these remarks, as an excellent specimen of sound physiological reasoning, as illustrative of the philosophical views of disease taught by physiological medicine, and as pointing out an important practical error in the treatment of colica pictorum, to which routine practitioners, and those whose intelligence has not kept pace with the progress of science still pertinaciously adhere; viz. the attempting to open the bowels by drastic cathartics, thus aggravating the mischief; instead of resorting to measures calculated to subdue the active inflammation of the intestines.

"William Lynch, aged twenty-seven, of a spare habit, by trade a tailor, states that on Friday last, (five days back,) while at breakfast, he felt a disinclination to eat, and nausea; soon after, his bowels became affected with slight wander-

ing pains, and, on going to the privy, he could not evacuate any thing. He took a dose of salts, which was repeated, without producing any effect on the bowels. The symptoms increased, and some rhubarb and calomel was taken: still no evacuation from the bowels. Vomited, soon after swallowing the powder, a large quantity of a greenish and bitter fluid.

"Is now suffering greatly, tossing about in the bed, and cannot remain a moment in one position; says that he feels as if his belly will burst; cannot bear the slightest pressure on the abdomen, which is very tense. Head-ache; thirst insatiable; tongue white and coated with mucus; mouth parched and dry; acid eructations; difficult micturition; urine high-coloured; pulse full, tense, and frequent; temperature below the natural standard; cold clammy sweat; nausea, and vomiting of a greenish and bitter fluid. Has not slept for six nights; great prostration. *Fiat venæsectio ē brachio, stat. ut sang. emittatur ad ̄x. dein applicetur scarificator, epigast. et region. umbilic. ad extract. sang. ̄xviiij. Foment. calid. toto abdomini. Adhibeantur enem. emollient. omni semi-hora donec alvus bene respond. et habeat pro potu ordinario; decoct. hordei, &c.*

"Two P. M.—Says that he feels something easier; thirst not so urgent. The sixth enema, on coming away, was discoloured in a trifling degree. Abdomen less tense, but painful on pressure; pulse more natural; skin cool and comfortable. *Iterum appl. scarificator, toto abdomini ut sanguis extrahatur ad ̄xxx.; et continuantur foment. potus enemataque.*

"Eight P. M.—Bowels have been evacuated six times since last visit: a large quantity of very fetid matter discharged, having the appearance of oil and indurated feces. Says that he does not feel any pain, but a soreness, as if his belly had been scraped inside. Pulse soft, but rather frequent; thirst moderate; urine high-coloured, but passed without difficulty. Perspires freely. *Cont. potus foment. enemataque.—R. Extract. opii, gr. ij.; Pulv. Jacobi, gr. iss. M. fiat pilula, hora somni sumenda.*

"October 24th, morning.—Bowels have been evacuated four times since evening, evacuations more natural. Pulse regular; temperature natural; thirst moderate; tongue clean and moist. Says that he feels comfortable; has slept about four hours the last night. *Cont. potus enemataque sed omitt. foment.*

"25th.—Is convalescent.

"25th.—Improving. Ordered to continue on low diet for a week: arrow root, jelly, sago, light soups, &c.; and to open the bowels, if necessary, with emollient enemas.

"*Reflections on the foregoing case, by Staff-Surgeon Doyle, Bermuda.*—It is to be lamented that nothing is said by the practitioner of the idiosyncrasy of the patient; whether he was of the sanguine, bilious, or nervous temperament; whether irritable, calm, or phlegmatic; what complexion, &c.; what previous malady or affection he had undergone, &c.: for all these are of importance to etiology, and to the study of the excitation of the different organs, if, as Borden and Bichat have told us, all the tissues of which the animal economy is composed have each of them a peculiar mode of action; a life, in fact, peculiar to itself. This action is susceptible of aberration; and it is in this that all pathology must consist, says Broussais. Now, in order to render this important case instructive and profitable to medical science, it will be best to subject the group of symptoms which characterizes it to a rigid analysis, in order thereby to arrive at a knowledge of its true nature.

"It appears that five days before, (23d October,) this patient had a predominance of (morbid) irritation in the *stomach*, a viscus capable of exciting the greatest number of sympathies; for sensibility and contractility being distributed in different degrees in the divers tissues which make up the living organism, those which possess it in the highest degree receive the immediate action of stimulants and transmit it to others. They are, for this reason, the natural movers of sympathies. The gastric disturbance was manifested by anorexia and nausea: this disturbance is rapidly communicated to the intestines, both smaller

and larger; for, the more the sensibility of the irritated organ and that of the individual are considerable, the more the sympathies are multiplied, and vice versa. This propagation of the gastric irritation into the intestines occasions the wandering pains in the bowels and the desire to go to stool. The morbid congestion having invaded the ileo-cæcal valve, the ileum cannot force its sterco-ral contents through it: hence costiveness and the inability to pass any feces when at the privy. The two doses of salts, taken with a view to obviate this costiveness, in place of acting as a purgative, only aggravated the distress, by causing over-excitation of the stomach and intestines. Then follow the rhubarb and calomel, which continued to add to the over-stimulation of the stomach, which, being thus excited to the highest, discharged its contents, together with the secretions of its glandular appendages, the liver, spleen, and pancreas. Hence the vomiting, soon after swallowing the powder, of a large quantity of a greenish and bitter fluid: in fact, this over-stimulation performs the office of an emetic, and thereby operates a partial revulsion of the morbid congestion. This partial revulsion procures a mitigation of the symptoms, and an alleviation of the sufferings of the patient, which lasts four days; at the end of which, the morbid sympathies, which have never been completely appeased and removed by any rational treatment, are aroused to an alarming activity, which may cause a rapid death through their excess, owing to the congestion and the disorganization of many viscera.

"On the fifth day, when the practitioner is called, he finds the patient suffering greatly, tossing about the bed, and cannot remain a moment in one position; says that he feels as if his belly would burst; cannot bear the slightest pressure on the abdomen, which is very tense: all which denotes that inflammation has invaded not only the mucous, sensitive, digestive surface of the intestinal canal, which causes tumefaction of the viscera, but it has also propagated itself to the serous membranes, particularly the peritoneum; a membrane rich in nervous expansions, and of exquisitely acute sensibility when suffering under active inflammation. Hence the tension and the impossibility to bear pressure on the abdomen. The head-ache denotes the participation of the sensorium, sympathetically irritated by the transmission to it of the sufferings of the viscera. The insatiable thirst denotes the inflammation predominating in the *ileum*;\* for, as there are two forms under which gastro-enteritis presents itself, I shall designate them here, in order to fix the seat of this terrible malady, with as much precision as I am master of. The first form is that of predominancy of the gastric phlegmasia, which is characterized by gastric pain, by the aversion for ingesta, and the rejection of and the difficulty of supporting them. The second form is with predominancy of enteritis, or, (as I understand it,) of inflammation of the smaller intestine, (*ileum*;) for this insatiable thirst, and the rapidity with which the appropriated liquids are absorbed, characterize the second form: therefore I would infer that enteritis is predominating. The tongue white and coated with mucus, the mouth parched and dry, and the acid eructations, denote the complication of gastritis. The difficult micturition, and urine high-coloured, denote the sympathetic participation of the urinary organs in this rapid and alarming phlegmasia. The pulse full, tense, and frequent, denotes the sympathetic participation of the heart, which is prevented thereby impelling the blood with measured force, and has its action precipitated. The temperature below the natural standard denotes the concentration of animal heat to be all in the inflamed viscera; too much vitality for the moment in the internal, and too little in the external tissues. Same cause for the cold sweats. The nausea and vomiting of green bitter fluid denote association of gastritis. The want of sleep and great prostration denote the participation of the brain in the inflammatory suffering of the viscera.

"I have thus gone through the whole group of symptoms detailed by the

\* This we suspect is an error; at least the fact requires confirmation.—Ed.



practitioner, and have endeavoured to analyze them according to the views of modern physiology, as it applies to pathology, in order to fix, with as much certainty as possible, the attention of our medical brethren upon the nature and seat of a malady so fatal as that denominated dry belly-ache of hot climates.

"The intestines have for too long a time been considered, when in a state of disease, only as conduits, more or less dirty, more or less filled with acrid irritating matters; the vapours of which, it was pretended, arose to disturb the brain. Under these views, the diseases of the intestine were reduced to two forms: first, the superabundance and the too great frequency of the dejections; secondly, the retention, the rarity, the thinness of these same dejections: in short, the two prevailing morbid states were *diarrhœa* and *constipation*. When blood was joined to the stercoral matters voided in *diarrhœa*, the name of *dy-sentery* was given to it; and, when vomiting accompanied the dejections, it was called *cholera*, and all the different shades of *lienteria*, *cœliac flux*, *hepatic flux*, *melœna*, &c. The pains which appeared to have their seat in the intestines were called *colic*; *ileus*, or *iliac passion*, when the fecal matters were voided by the mouth. The name of *tenesmus* was given to the sensation of tension referred to the anus. The presence of *worms* was added to this nomenclature; as was also the *intestinal tympanitis*, *hemorrhoids*, &c., and finally came *enteritis*.

"From a more correct acquaintance with this latter disease, we know that, with the exception of mechanical derangements, all the affections above enumerated, and even more, belong, directly, or indirectly, to morbid irritation, to the inflammation of these viscera; that ulceration, schirrus, intestinal cancer itself, is a consequence of enteritis or colitis. It is thus that we see daily the important part which the intestines play in the *production of fevers*. In short, the knowledge of this important fact is one of the keys to physiological pathology, that 'so soon as *local* morbid irritation arises to a certain degree, it repeats itself, and is propagated into other systems, or into apparatuses more or less distant from the primitive focus, and always without changing its nature.'

"This fact discovers the secret tie which links the slightest with the most serious maladies. It fills up an immense blank which existed in medical science from the remotest antiquity; it destroys that insulation of the divers shades of irritation, which may be regarded as the source of medical ontology; it reduces to their just value all the distinctions established by nosologists.

"In this case, so successfully treated by my friend, Mr. Barcome, I would, in place of *colica pictonum*, designate it *gastro-entero-peritonitis*; and I will venture to affirm, that, had the case terminated fatally, dissection would have shown the ravages of the inflammation to have been confined chiefly to the viscera from which I have designated it, and that the colon was but little or nothing inflamed; for it is not until inflammation passes the ileo-cœcal valve that colitis attended with *diarrhœa* supervenes; whereas, in the case before us, costiveness prevailed, which is the characteristic of enteritis, or inflammation of the small intestines.

"But, perhaps, one of the most important facts for medical science, to be gained from the contemplation of this case, is this, viz. that, in intestinal inflammation, local depletion, antiphlogistics, and emollients, are the real purgatives. For it was not until a reduction of the morbid congestion, effected by their means, was brought about, that any fecal matters could pass into the cœcum through the inflamed opening of the ileum, the drastics, given with a view to purge, only aggravated the inflammation, and added to the danger."—*Lond. Med. and Phys. Journ. April, 1829.*

14. *Rare Species of Dysphagia*.—This species of dysphagia was attributed by VALSALVA, who was the first to describe it,\* to a luxation of the cartilaginous appendices of the os hyoides. The disease was brought on, in the instance met with by Valsalva, by the deglutition of a hard and large substance; but in two

\* In his treatise de Aure Humana.

cases described by MOLINELLI\* it was produced by strong pressure on the anterior part of the neck. A fourth case has been recently published by Dr. MUGNA, in the *Annali Universali di Med.* November and December, 1828. These, as far as we know, are the only cases on record. Whether the disease is really as rare as this would seem to indicate, we are unable to say; but even if it be so, it is proper that our readers should be acquainted with the symptoms and the proper mode of treatment, and we shall therefore transfer to our pages the account of the last case by Dr. Mugna.

A person, aged sixty, in swallowing a large piece of tendon of beef, which he had imperfectly chewed, experienced suddenly a sensation of pain, as if the piece of tendon had been arrested at the entrance of the œsophagus; the patient was quickly tormented with continual but ineffectual efforts at deglutition, not being able to swallow even his saliva or a drop of fluid. Dr. Mugna, who was immediately sent for, found the patient fatigued by his efforts to swallow, which were incessant; the pain became more and more severe; when the patient had exhausted himself by his efforts to swallow, a noise similar to that produced by air rising from the œsophagus was heard. The respiration and voice were perfectly natural, and no change was observed in the form or appearance of the throat or neck. A sound was easily introduced into the œsophagus beyond the point where the patient experienced the sensation as if the tendon was stopped. The most attentive examination with the sound could not discover any obstacle at this spot, nor was any relief afforded. The place indicated by the patient as the one where he supposed the foreign body arrested, was precisely that occupied by the os hyoides. Dr. M. being satisfied that there was no foreign body there, thought that the dysphagia was owing to a displacement of the os hyoides; he accordingly introduced the first and second fingers of his right hand into the throat of the patient, beyond the base of the tongue, and moved in different directions the os hyoides, while at the same time he kept the left hand applied to the front of the neck and upon the os hyoides. The painful sensation speedily disappeared, and immediately afterwards the patient could swallow. Two years afterwards, in swallowing a large piece of cake, this dysphagia returned, but was promptly removed by the same measures which proved successful in the first case.

The precise nature of the displacement of the os hyoides producing this disease, has not been satisfactorily ascertained.

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15. *Dropsy of the Pericardium.*—The *London Medical and Physical Journal*, for May last, contains an account of a case of dropsy of the pericardium, by F. W. Wood, Esq. in which the pericardium contained *two quarts* of a perfectly limpid fluid. We may mention also that “the outer coat of the pericardium had a thin shining appearance, whilst on the inside were deposited layers of coagulable lymph, resembling the rugæ on the stomach of a cow. The heart was also covered with a similar deposit; its parietes were much thickened, and it appeared as if fore-shortened, the apex being pressed upwards. In the left ventricle was a portion of coagulable lymph, of a yellow sisy appearance, of nearly an ounce weight. The carnae columnæ were much enlarged; the valves free from any apparent disease. The structure of the lungs was perfectly unimpaired.”

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16. *Inflammation of the Umbilical Vein with Infantile Erysipelas.* By ROBERT LEE, M. D.—“An infant, four days after birth, was attacked with erysipelatos inflammation of both forearms, and severe febrile symptoms. Two days after the first appearance of redness and swelling of the integuments of the arms, a similar affection was perceived in those of the hypogastrium, genital organs, and upper part of the thighs. The child died on the twelfth day subsequent to birth, and was examined on the 18th of November, 1828, two days after death.

\* *Comment. Bononiens. Scient. et Art. inst. Acad. Tom. V.*

"The cellular tissue of the affected parts was highly vascular, and in the inguinal regions infiltrated with serum. On opening the abdomen, the peritoneum covering the different viscera was found in a healthy condition; but the umbilical vein, from the navel to the liver, was preternaturally indurated and distended. On laying it open, a yellow-coloured purulent fluid escaped, and the whole of its interior surface was found lined with a layer of closely adhering lymph: this coating of lymph extended into the principal branches of the umbilical vein, proceeding to the liver, and along the ductus venosus, as far as the vena cava. The umbilical vein and ductus venosus remained pervious, and there was no morbid appearance in the vena cava above or below its entrance. The coats of the umbilical were much more thickened than they are usually found to be at the same period after birth.

"Morbid appearances of the umbilical vein in young children, similar to those which I witnessed in the foregoing case, have not been described by any pathologist in this country, as far as I have been able to ascertain. In the writings of Gaithshore, Bromfield, and Underwood, we find little, indeed, that is satisfactory, respecting either the nature of infantile erysipelas or the alterations of structure which accompany it. That inflammation and suppuration of the umbilical vein and its branches not unfrequently occasion fatal erysipelas, or death, without any inflammation of the surface, in new-born children, I am disposed to infer, not from the preceding instance alone, but from the observations of several continental writers on the subject, and from the acknowledged pernicious effects of purulent matter when secreted within the veins of the adult.

"Professor Oslander found the lungs inflamed, and the umbilical vein, from the navel to the liver, filled with a yellow fluid, in a child who died of erysipelas a short period after birth. In the body of a child, seven days old, examined by Meckel, the umbilical vein was found inflamed, and its inner membrane covered with a layer of pus, and perforated with small ulcerations. In another child, attacked soon after birth with vomiting, colic, diarrhœa, jaundice, and fever, he found the peritoneum inflamed, and a puriform effusion in the abdominal cavity. The branches of the vena porta, and those of the umbilical vein, were swollen, and their coats much thickened.

"M. Breschet has repeatedly observed this inflammation of the umbilical vein and its branches in the bodies of children who had died a few days subsequent to birth; and he is disposed to consider this phlebitis as the sole cause of death in many of these cases."—*Lond. Med. and Phys. Journ. May, 1829.*

17. *Perforation of the Stomach, with Peritoneal Inflammation, where no symptoms indicative of previous Disease existed.* By JOHN ABERCROMBIE, M. D.—A strong and healthy-looking servant girl, aged about twenty-one, while engaged at her work between seven and eight o'clock in the morning of one of the last days of September, 1827, was suddenly seized with excruciating pain in the belly, sickness, and vomiting. About ten, she was bled ad deliquium, and twice afterwards in the course of the day. The bowels were freely moved by an enema, and she took purgative medicine which did not operate; but there was no alleviation of the symptoms. The belly became tense, tender, and tympanitic, the pulse feeble and rapid; every thing she took was vomited, and she died in eighteen hours from the attack.

*Inspection.*—The peritoneal cavity was distended with air, and also contained a considerable quantity of fluid, which had the appearance of the liquids she had swallowed. There was extensive peritoneal inflammation, with a coating on the bowels of puriform matter. In the middle of the smaller curvature of the stomach, there was a round opening of about one-third of an inch in diameter. At the part where it was situated, the coats of the stomach were in some places nearly half an inch in thickness, and the thickening extended in a greater or less degree over a portion five or six inches in extent. The inner surface,



at the place of the rupture, presented a deep excavation with rounded and smooth edges, like a deep corroding ulcer which had cicatrized. It was fully half an inch in diameter, and a third of an inch or more in depth, having penetrated the thickened substance until it was bounded merely by the peritoneal covering; and it was this which had given way in the fatal attack.—*Pathological and Practical Researches, &c.*

18. *Ulcer of the Stomach Fatal by Hæmorrhage.* By JOHN ABERCROMBIE, M. D. —A gentleman aged about forty, had been long dyspeptic, and liable to pain in his stomach, which had not assumed any fixed or regular character; but he required great care in respect of his diet, and many articles were apt to disagree with him. He was otherwise in good health, and applying himself actively to business till Saturday, 5th November, 1825, when he was suddenly seized in his counting-house with a feeling of extreme faintness. He was assisted with difficulty to his dwelling-house, which was in the neighbourhood, and soon after vomited a large quantity of black fluid resembling ink. On Sunday he continued very sick and faint, and vomited occasionally the same kind of fluid, and he had discharges of similar matter from the bowels. On Monday he was better and walked out, but had some vomiting in the afternoon. On Tuesday he still felt very unwell, but without any marked symptom. On Wednesday he was seized with pain in the stomach, followed by vomiting of pure blood to the amount of several pounds. This was followed by extreme faintness and coldness, and the vomiting of blood returned in the afternoon. Dr. Abercrombie now saw him for the first time along with Dr. Hamilton, and found him extremely pale and exhausted, his skin cold, and his pulse very feeble. He complained of nothing but great faintness; but every attempt to rally him proved ineffectual, and he died in the night, having been again seized some time before his death with violent pain in the stomach.

*Inspection.*—The stomach was of immense size, but showed no appearance of disease in its structure, except at a part in the small arch about half way between the cardia and pylorus. Here a round defined portion, about the size of a half-crown piece was much indurated and about half an inch in thickness. On the inner surface of this portion, there was a small defined ulcer about half an inch in diameter, and more than a quarter of an inch in depth, and the bottom of it was occupied by a firm fungus mass of a dark brown colour. No other disease could be detected in any organ.—*Ibid.*

19. *Ulceration of the Stomach fatal by Perforation.*—A young woman, aged eighteen, had been affected for about six months with variable appetite, and occasional pain in the stomach, which made her frequently sit with her body bent forward, and her hand pressed upon the epigastric region. Little notice was taken of the attacks, as she was going about, and otherwise in good health; and for some weeks previous to the attack now to be described, her appetite had greatly improved. On the 26th November, 1824, while in a room by herself late in the evening, she was heard to scream violently; and when a person went into the room, she was found unable to express her feelings, except by violently pressing her hand against the pit of the stomach. When she was soon after seen by Mr. McCulloch, she was moaning as if in extreme agony, but was unable to speak; the pulse was 86 and very weak; she could scarcely swallow; but soon after vomited the contents of the stomach, which seemed to be merely food she had recently taken. Various remedies were employed without relief. She continued with every appearance of extreme suffering, and unable to speak, till seven o'clock in the morning of the 27th, when she said the pain was considerably easier, but was still very severe in the pit of the stomach, and was extending downwards over the abdomen. The abdomen was now becoming distended, and when Dr. Abercrombie saw her about three o'clock in the afternoon, it was distended to the greatest degree and very tense. The pulse was extremely feeble; she was scarcely able to speak, but her countenance was ex-

pressive of extreme suffering. Nothing afforded the smallest relief, and she died about two in the morning, twenty-nine hours from the attack.

*Inspection.*—The cavity of the peritoneum was distended with air, and likewise contained upwards of eight pounds of fluid of a whitish colour, and fetid smell. There was slight but extensive inflammatory depositions on the surface of the intestines, producing adhesions to each other, and to the parietes of the abdomen. On the upper part of the small curvature of the stomach near the cardia, there was a small perforation of a size which admitted the point of the little finger. Internally this opening communicated with an ulcerated space on the mucous membrane, about the size of a shilling, with slightly thickened and hardened edges, and a considerable perpendicular loss of substance. The stomach in all other respects was particularly healthy.—*Ibid.*

20. *Perforating Ulcer of the Stomach, and communication with the Arch of the Colon.*—This interesting case occurred in a gentleman, aged fifty-six, who had previously enjoyed good health, except occasional dyspeptic complaints; began to feel languid, with impaired appetite, some loss of flesh, and occasional pain in the abdomen; but he was able to go about and attend to all his engagements, which were extensive and fatiguing. These symptoms had continued two or three weeks, when one day, while walking in the street, he was seized with vomiting, and the matter vomited had the odour and appearance of fæces. He felt no farther inconvenience till about a week after, when he was seized in the same manner. After this the vomiting returned at various intervals, sometimes three or four times a-day; and sometimes he was free from it for a week at a time. The matter vomited always consisted of pure fæces, sometimes so consistent that it was brought up with difficulty, until he diluted it by swallowing hot water. During the whole course of the affection, the bowels continued regular or easily regulated; the fæces varied considerably in their appearance; but that which was vomited always resembled what was passed from the bowels so closely that it was impossible to distinguish them. He never was observed to vomit food or other matters which had been taken into the stomach. His appetite continued good, and no disease could be detected by examination. He lived in this state three months, and died gradually exhausted, without any particular change in the symptoms, except that a week before his death he vomited a considerable quantity of blood. There was occasional pain in the abdomen, but not distinctly referred to any particular part.

*Inspection.*—The stomach was found contracted, and adhering to the parietes of the abdomen on the left side, and to the arch of the colon. At the place of the adhesion, a soft tubercular mass was formed, which seemed in general to be about two inches in thickness. The stomach appeared externally healthy; internally it showed a mass of ulceration which occupied the whole of its great curvature, and covered about one-half of the inner surface of the stomach. The pylorus and whole pyloric extremity were healthy. In the centre of the ulcerated part there was a ragged irregular opening, fully two inches in diameter, which made a free communication with the arch of the colon; and, around the opening, there was also some ulceration of the mucous membrane of the colon. The intestines in all other respects were healthy. The small intestines were empty; the caput coli was distended with feculent matter, and the colon throughout contained healthy well-formed fæces.—*Ibid.*

21. *Involuntary Periodical Drunkenness.*—M. P. who acquired, some years back, a merited reputation among the bookbinders of Paris, left that city, after many domestic troubles, which determined, it would appear, the complaint in question. He went to live at Valence, where he married anew, and continued his business with equal success, during his lucid intervals. About fifteen years ago he was driven, by a sort of internal movement, to drink wine without attention and without satiety. Before this period his life had been a model of virtue and sobriety. The unfortunate inclination just mentioned ceased, but,

since that period, he has been regularly subjected to a return of it every two or three months, and it continues about the same length of time as it did the first time. No symptoms denote the approach of the access. He never speaks of his pathological state, of which he appears insensible. The following has been his regular course of living, observed during the space of nearly two years:—When the periodical malady is coming on, M. P. naturally of a lively disposition, rises about five or six o'clock in the morning; he takes some money out of the till, and hastens into a tavern, where he drinks, without ceasing, until ten or eleven. He then returns home, tottering, seldom falling down, descends into the cellar, takes up a great number of bottles of wine, places them on the kitchen table, sits down by them, and drinks night and day. If by chance he goes to bed, he gets up, even in the dark, to go in search of wine. During the paroxysm, he never shows the least appetite, and he does not consume two ounces of food during the whole course of the access. The urine is copious, high-coloured, and sometimes depositing a lateritious sediment. During the first and second periods, he very often goes, both in the morning and afternoon, to a tavern; then he is subject to many fantasies, more or less puerile, which can only be satisfied at great expense. When the paroxysm draws towards its end, that is, fifteen or twenty days before the term of its ordinary duration, the patient no longer goes from home. He becomes reserved, passionate, and behaves spitefully to his wife. His state totally changes; he flies from the light, hides himself in the most obscure corner of the kitchen, where he always shuts himself, constantly muttering, but drinking rather less than before; and, as if ashamed of his condition, he desires to be alone. During the access, on the contrary, although tottering, and half asleep, the brain exercises its ordinary functions. He readily follows the course of conversation. During the paroxysm he entirely neglects his occupations. The invasion of the affection is sudden; its termination is also similar. It commences in the morning, and ends the same after a profound sleep. At this period the patient goes to bed towards midnight, sleeps almost naked, rises at the expiration of some hours, and resumes his occupations, as if he had quitted them the evening before, without any reference to his previous state, of which no signs remain, but a great lassitude, of the origin of which he is ignorant, and the ordinary taste of drunkards. His physiognomy changes, as does also his breath; the mussionation and continual salivation diminish; his walk becomes steady; he loses that state of approaching paralysis with which he was before affected; his speech becomes more free; his tongue insensibly loses the indications of stupor which affected it during the paroxysms; he is pale, wan, and debilitated; and all his traits are indicative of a remarkable laxity. M. P. is about sixty years of age; his present habits have greatly altered his faculties, both physical and moral; notwithstanding his age, he is of a very lymphatic temperament, and of a constitution eminently nervous and lank, though strong. The most eminent medical men of the capital, and of the neighbourhood of Valence have been consulted respecting his case; but their prescriptions have been of no avail.—*Journal des Progrès, Vol. XI.*

22. *Case of extraordinary Universal Emphysema.* By Dr. JAHN.—“A prisoner in a workhouse at Meiningen, who had been for same time affected with dropsy in consequence of long intemperance and the meager diet allowed by the establishment, received from one of the overseers a chastisement, which next day left no other mark except an ecchymosed spot in the left lumbar region. On the second day the neck, face, and breast began to swell; and from the crepitation felt on pressure, it was evident that the swelling arose from the effusion of air throughout the cellular tissue. He made no complaint, however, and in particular his breathing was as free as usual. In the course of the subsequent night the swelling rapidly extended also over the whole head, trunk, and extremities; at the same time he was seized with great anxiety, severe cough, and a sensation as if the lungs were gradually pressed more and more upwards; and towards



morning the sense of impending suffocation became so dreadful that he entreated his attendant to give him his shoemaker's knife in order to make incisions in the skin to let out the air. In the morning, when the relater, Dr. Jahn, saw him, his state was so frightful that it appeared as if a further delay of fifteen minutes would have been enough to put an end to his sufferings. He sat upright in bed supported by the attendants. The head, trunk, and extremities were at least one-half thicker than natural. The upper eyelids projected like two bladders of the size of apples, and the eye-balls were emphysematous, and projected from the sockets; the organs within the mouth were also puffed up with air; the scrotum was as big as a hat, and the penis as thick as a stallion's. A peculiar oily sweat covered the whole integuments, which sounded when struck like a wet drum, and crackled when handled. The dyspnœa was most urgent, the respiration being exceedingly frequent, hurried, hissing, and accomplished with the neck projected like that of a horse at speed, and the hands grasping the chair convulsively. There was likewise froth round the mouth, a frequent suppressed cough, incapability of speaking, but perfect sensibility.

"A trocar was immediately thrust into the scrotum, from which an inodorous air rushed out with great force and a hissing noise, and to the patient's instant relief. The swelling rapidly subsided every where, the breathing became much easier and deeper, the patient was able to speak again and joked about his blown-up appearance. His account of his previous sufferings was that he felt the lungs gradually pressed more and more upwards, and more and more closely, then a sense of tightness in the region of the glottis and throat, and at length a feeling as if he was choked from within outwards. As the aperture in the scrotum was insufficient for the discharge of the whole air, other perforations were made on the extremities, back, and breast. Still the air evidently continued to be pressed into the sub-cutaneous cellular tissue, and it was prevented from accumulating only by the new incisions. As soon as the patient's state of amendment would allow an examination, the chest was carefully explored, but the most diligent search could not detect any fracture, splinter, depression or curvature of any rib, or laceration of a muscle; neither did he feel the slightest pain or uneasiness internally, except tightness in the chest, which was greatly diminished.

"The antiphlogistic regimen was strictly enjoined. Next morning he was very comfortable, and his state rapidly improved. For ten days the air continued to collect a little towards night; but it was always easily removed by friction and pressure. On the twelfth day the legs were somewhat œdematous; but the œdema was soon removed by appropriate remedies. It is evident that the emphysema in this case arose from a laceration of the lungs and costal pleura."—*Ed. Med. and Surg. Journ. April, 1829, from the Magazin für die gesammte Heilkunde, 1828.*

23. *Case of Coma which lasted Fifteen Months.*—This extraordinary case is related by Dr. BISCHOFF, of Vienna, in a work recently published. It occurred in a quarter-master, at the garrison of Komorn in Hungary, æt. 42, who had enjoyed excellent health until June 6th, 1823, when he became extremely agitated, in consequence of a severe reprimand he received, and suddenly fell down, and remained in a state of complete catalepsy. This continued for several days, when he had a violent fit of epilepsy, which returned about every third day, but became gradually milder, and after three months entirely ceased. From this time he fell into a state of coma, in which he continued for fifteen months, without exhibiting any sign of muscular motion; the eyes, which had been at the commencement of this affection open, were subsequently closed, and remained so; respiration, circulation, excretion of urine and fæces, and cutaneous transpiration, were carried on uninterrupted, but with less energy than natural. The patient was nourished by liquid food: to introduce this into the mouth, the jaws being firmly closed, a tooth was broken out. Deglutition was regular, though extremely slow. All solid food was almost instantly rejected

by coughing. The treatment consisted in the use of stimulants, which produced no effect, and the patient, having continued in this lethargic state for fifteen months, was removed to Vienna. At this period, December 1st, he is represented to have been in the following state:—"Middle stature, fair complexion, and considerably wasted; the countenance was pallid, collapsed, and expressive of pain; the jaws were firmly pressed together, and the eyes were constantly closed; but when either of them was opened, the other opened also spontaneously; the temperature of the body was natural; the skin soft, flaccid, and slightly transpiring; the functions of the nervous system, and the mental powers, seemed to be quite extinct, and not the least trace of consciousness or will could be discovered; the external senses exhibited a complete torpidity towards stimuli, even of the strongest kind; intense light produced a very slight contraction of the pupil, but appeared to have no effect on the optic nerve; the strongest noise made no impression on the ear; caustic ammonia, when applied to the mucous lining of the nose, and the most intense irritation of the skin, had also no influence. All the voluntary muscles were perfectly motionless; the limbs remained in any position in which they were placed, with the exception of the left leg, which was spasmodically contracted. The organic functions were regularly, though very slowly, performed; respiration was carried on by the abdominal muscles; the pulse was between 84 and 90, small, contracted, and rather hard. The quantity of the excretions corresponded with that of the food which the patient took; the urine was scanty, and high-coloured; the bowels were very torpid, and required the use of irritating injections."

He was here treated by the daily use of the warm-bath, in which was dissolved two ounces of caustic potash, and the quantity gradually increased, repeated sinapisms to the spine, &c. without any apparent impression. Strong sternutatory powders were introduced into the nose, without any effect, and two moxas over the region of the atlas, and afterwards the actual cautery over the tuber occipitale, without producing any sign of pain or voluntary movement. These severe remedies were persevered in, and the patient gradually recovered his health. Speech, however, remained for a long time incoherent, and the organs of the senses appeared to require a considerable period before they became accustomed to external stimuli; at first even a slight sound produced a violent tingling in the ears, and daylight was intolerable to the eyes. By degrees he recovered the memory of his former life; but of what happened during his disease, he had only a very few obscure images, as of a confused dream. By May his health was restored, and continued good until January, 1827, when he was attacked with pneumonia, in consequence of exposure, which terminated in phthisis, of which he died, on the 16th of May.

*Post mortem examination.*—Brain healthy; pons varolii and origin of the nerves much injected; the sympathetic nerve, especially at its first thoracic ganglion, of a very white colour, and unusually large; the dura mater of the spinal column considerably injected at its cervical portion. In the lumbar vertebrae, two ounces of blood were extravasated between it and the spinal chord; the cauda equina was surrounded by an albuminous effusion; the spinal arachnoid gorged with blood; the chord itself healthy. The lungs contained very large ulcerous cavities; the heart and large vessels, as well as the abdominal viscera, were healthy; the spleen only was of greater size than usual, and the solar ganglion, with the nerves originating from it, appeared to be considerably enlarged.

24. *Rupture of the Heart.*—A female aged fifty-eight, who appeared to be in good health, suddenly screamed out and instantly expired. On examination, the heart was found pale and flabby, and about an inch above its apex, on the left margin exhibited a longitudinal rupture, leading into the left ventricle, six lines in length, and half a line in breadth; its edges were irregular and lacerated. About three lines distant from the former there was another longitudinal rupture, which was, however, still covered by the pericardial lining of the heart.

The left ventricle was considerably enlarged; its external and internal linings were healthy; but its muscular tissue, especially round the fissures, without any appearance of fibres, and had degenerated into a soft, yellowish-white pulp. The right ventricle, as well as the large vessels was perfectly healthy.

Dr. BIGNARDI, of Modena, who relates the preceding case, also mentions another of a young lady, apparently in good health, who died suddenly. On examination, the cause of death was found to be rupture of a small aneurismatic tumour at the origin of the aorta. The parietes of this tumour consisted only of the internal and external lining of the heart; the muscular tissue around it was softened.—*Annal. Univers. di Med. Jan. 1829.*

25. *Disease of the Heart.*—A woman upwards of eighty years of age, who had been affected for many years with disease of the heart, was admitted into the Hospice de la Salpêtrière. She complained of difficulty of breathing and palpitations; and died in a few days after her admission. "On examination, the heart was found considerably increased in size; it was covered externally by a false membrane, which completely enveloped it, and which extended in the form of a sheath over the roots of the aorta and pulmonary artery. Thicker towards the apex of the heart than at its base, this membrane, of a reddish aspect, appeared exactly, both in consistence and colour, like a coagulum of blood, differing, however, from blood by its membranous form and well-marked vascular aspect. It had contracted no firm adhesion to the heart, from which it was easily detached, and it was separated from the pericardiac covering of the organ by a considerable quantity of fluid blood. The pericardium presented no trace of inflammation. This membrane having been removed with precaution, the heart exhibited, in the middle of the anterior surface of the left ventricle, a small fissure, and several dark-coloured spots. A probe introduced into this opening, and left to its own weight, penetrated very easily into the cavity of the ventricle, under one of the *carneæ columnæ*. The internal parts surrounding this aperture did not appear diseased. The spots, or ecchymoses, already mentioned, were visible on the external surface only of the heart. Each dark-coloured point which formed them, was the termination of a small canal filled with coagulated blood. These canals joined in some points, but in others they were entirely isolated, and had then less the form of a canal than that of a cavern, or of a rupture similar to that observed in the brain of persons who die from recent hæmorrhage of that organ. Besides these alterations, the heart presented a hypertrophy, with a dilatation of the left ventricle, without ramollissement of the parietes; an ossification, and, consequently, a considerable contraction of the aortic orifice. The aorta was dilated as high as its arch, but recovered its ordinary size below that part. It contained ossifications at many points of its course. The orifices of the subclavian and carotid arteries were reduced in size by several points of ossification which surrounded them."—*Lond. Med. and Surg. Journ. April, 1829, from La Lancette Française.*

26. *Satyriasis.*—M. CHAUFFARD has given an account in the *Journal Universel*, for December last, of a case of satyriasis and indomitable salacity, in a man aged fifty-three years, produced by a blow on the inferior part of the occipital region. Erotic delirium, with the most libidinous acts and conversation, continued for three months. This state was followed by convulsions, afterwards paralysis of the left side, and death.

27. *Hernia of the Lungs from Tight Stays.*—A girl, aged sixteen years, applied to M. BRESCHET, at the Hôtel Dieu, with a tumour of variable size, when largest as big as the fist, which occupied the right side of the neck, extending from the clavicle, behind which it arose as high as the thyroid cartilage. There was every reason to believe that this tumour was formed by the upper part of the lungs forced out of the cavity of the chest by tight lacing, which prevented the lungs from dilating, except at the upper part.—*La Clinique.*



28. *Cynanche Tonsillaris*.—Dr. WATSON relates in the *Medical Gazette*, for January last, an interesting case of this disease, which terminated fatally by hæmorrhage. On examination after death, it was found that an abscess had existed, which extended along the left side of the larynx, leaving the os hyoides rough and bare, and opened internally behind and below the left tonsil, and nearly opposite to the epiglottis. The lingual branch of the carotid was traced to the situation of the abscess, where it terminated by an open mouth; the fatal hæmorrhage had of course taken place from this vessel, which being involved in the abscess had been divided by ulceration. In such a case the only chance of relief would appear to be the placing a ligature upon the carotid artery.

### MATERIA MEDICA.

29. *Mode of Exhibition of Copaiba*.—The following formula is recommended in the *London Medical and Surgical Journal*, for January last:—℞. bals. copai-bæ. fʒij.; pulv. acaciæ, ʒij.; sacchari, ʒiij.; liq. potassæ, fʒiss.; spir. myristicæ, fʒj.; aquæ, fʒvj.; ft. mist. Dose two table-spoonsful three times a day. The efficacy of the copaiba is said to be much increased by the combination. It is apt, however, to leave a caustic taste, the mouth and fauces should therefore be washed after taking it.

30. *Anti-asthmatic Effects of the Tincture of Lobelia inflata*.—Mr. W. B. ANDREWS states, in a communication to the editor of the *London Medical Gazette*, that he has been for upwards of two years afflicted with an inveterate asthma, which deprived him of rest, and the spasmodic effects of which were frequent and most distressing. When he found these paroxysms coming on, he now takes fifteen drops of the tincture of the *Lobelia inflata*, which invariably gives him immediate relief, although previously to his using it, the violent coughing fits often lasted from one to two hours.

31. *New Mode of using Iodine*. By M. PELLETAN.—This method, the object of which is to prevent the iodine from irritating the stomach, consists in the combination of this substance with morphia. M. Pelletan represents that he has used the following mixture in a case of considerable and obstinate engorgement of the left breast:—℞. axungia, ʒj.; proto-ioduret of mercury, gr. vj.; acetate of morphia, gr. viij.—*Nouvelle Bibliothèque Médicale*, Feb. 1829.

32. *Rhubarb Plant*.—"The plant that yields the fine rhubarb of commerce, having been long involved in obscurity, is now discovered to be the *Rheum australe*; it flowered in June last, in the collection of A. B. Lambert, Esq., at Boyton House, Wilts. The stem of the cultivated plant is from seven to ten feet high; the leaves are cordate, ample, numerous, and of a grass green colour; the flowers are smaller than in any of its congeries, and of a dark, or blood red colour; the seeds are dark red, with a highly polished surface; when bruised, they emit a powerful odour of rhubarb. It is perfectly hardy, and ripens its seed readily in this climate.

"Dr. Wallich, of the Calcutta Botanic Garden, sent over some dried specimens of the true rhubarb plant, and some seeds, from which Mr. Lambert raised a number of plants. We were informed by Mr. Anderson, of the Apothecaries Garden, at Chelsea, that he had proved the stalks of this species to be powerfully purgative, when employed in the same manner as those of the *Rheum undulatum*, in pies.

"It seems probable, that in a rich, loamy soil, we shall be able to cultivate this valuable article of the materia medica advantageously. For a fuller account, and a coloured figure of the plant, see *Sweet's British Flower Garden*, October, 1828."—*London Med. and Surg. Journ.* Jan. 1829.

## PRACTICE OF MEDICINE.

33. *Case of Pneumathorax in which an operation was unsuccessfully performed.*  
 By JAMES JOHNSON, M. D.—Mr. Cornish, a surgeon, aged twenty-eight, of a scrofulous diathesis, was attacked in the latter end of November with thoracic inflammation, which he neglected. When seen by Dr. Johnson on the 20th of December, he was lying on a sofa on his right side, breathing with considerable difficulty, and frequently coughing; pain in the centre of the chest; can only lie on the right side; expectoration scanty and extremely tenaceous, but without purulency; pulse 130, sharp, wiry; skin not very hot nor dry; tongue moist; thirst moderate; right cheek flushed; urine high coloured and scanty. "On uncovering the thorax, the muscles of respiration were seen in violent action, but the breathing was principally carried on by the diaphragm. There was no perceptible difference in the size of the two sides of the chest, but a very remarkable difference in the sound emitted on percussion: the *left* side sounded louder than natural, the right sounded considerably duller than natural. On applying the ear to the *left* side, which sounded so well, little or no respiration could be heard; on listening to the *right* side, which sounded so dull, the respiration was very loud, and accompanied with much wheezing. The heart was felt beating rather to the *right* of the middle of the sternum, and no trace of it could be felt in the *left* side." Blood was taken away generally and locally, and digitalis, colchicum, and antimony were also given in powerful doses, with a view of making an impression on the circulation. But little relief was afforded by the bleeding; the blood was remarkably buffed and cupped. Dec. 21st. Left side sonorous back almost to the spine; respiration more indistinct than before; pulsation of the heart rather farther to the right; right side very dull on percussion, and the respiration very noisy and confused; metallic tinkling distinctly audible in the left side of the thorax, not only when the patient coughed or spoke, but even during every inspiration and expiration; leaving no doubt of the existence of pneumathorax. The next five or six days were consumed in the attempt to relieve the thoracic inflammation, and to promote a free expectoration, but with little advantage. On the night of the 29th of December, the patient nearly expired from suffocation, and on the next morning Dr. Johnson explained to the patient the nature of his case, namely, "that there was an aperture in the left lung, through which air was extravasated into the left pleural cavity, which cavity also contained some fluid, the precise nature of which could not be ascertained. It was stated to Mr. Cornish that the increasing collection of air was pressing severely on the right lung, that it had already pushed the heart into the right side of the chest, and that he saw no prospect of relief but from an operation."

In consultation with Mr. Lawrence and several medical men in the afternoon, December 30th, it was thought that the patient was so near death as to render the operation hazardous, if not unavailing, as it was believed that he would expire during the operation. At ten o'clock at night, however, at the earnest request of the patient and his friends, the operation of paracentesis thoracis was resolved upon as the only measure that offered even temporary relief from the dreadful state of suffocation to which the unfortunate patient was reduced. Mr. Guthrie accordingly made an incision in the anterior and lateral part of the left side of the chest, between the sixth and seventh ribs, and cautiously opened the pleura with the scalpel. Instantly, air rushed forth with a loud hissing noise. The relief was almost instantaneous. The patient turned upon his back, and breathed with comparative freedom. He was turned on his left side, but no fluid came from the wound. A piece of linen was placed over the orifice. The relief continued for some hours, and then the difficulty of breathing returned to a certain extent.

Dec. 31st. Dyspnœa considerable; left side nearly as sonorous as ever; metallic tinkling perfectly audible; wound closed. A director was introduced into

the wound, and air instantly rushed out of the chest, with immediate relief, as in the first operation. A probe-pointed bistoury was passed in, and the opening in the pleura enlarged to half an inch. The pulse had fallen to 120; countenance good; skin moist; expectoration more copious, and muco-purulent. On examination of the chest after the escape of the air, no metallic tinkling could be heard. The patient took nourishment. In the evening not so well, a probe was again introduced, when air escaped with some noise. Twenty drops of laudanum were given in a saline draught.

January 1st, 1829. The patient had enjoyed several hours of tranquil sleep, the first during some weeks; breathing easier; expectoration more copious and inclining to purulency; pulse less frequent and more expanded; appetite good. He got out of bed this day without assistance, went to the commode, and had a natural motion. A cannula was introduced into the wound, and a taper held near it. "During inspiration the cannula was closed with the finger, so that no air could enter the chest; and during expiration, the finger was removed from the cannula, when a rush of air always escaped. This was continued until no doubt could remain as to the fact that part of the air drawn in by the mouth was thrown out of the wound at each expiration. This phenomenon, and especially the large quantity of air thus thrown out, proved that a considerable aperture of communication existed between the bronchia and the cavity of the pleura—a circumstance which greatly lessened the hopes of recovery. It was found that since the operation the apex of the heart beat about an inch and a half, or two inches, nearer the central line of the thorax than before. The pulsation was still, however, to the right of the line." The patient continued comfortable through the day, but at night he became greatly oppressed. The cannula was re-introduced, and with some relief.

January 2d. It was evident that the patient was sinking; he had a strong convulsion early in the day, and about one o'clock expired.

*Autopsy.*—Previous to the examination, Dr. Johnson, at the request of one of the medical gentlemen who were present, stated the disease to be pneumothorax, and the following to be the morbid appearances which he expected to find, namely, "a collection of air and some other fluid in the left side of the chest; collapse of the corresponding lung; aperture in the lung capable of giving free vent to air from the lung to the cavity of the pleura; displacement of the heart; probably tubercles in the right lung." On raising the sternum, the heart was found rather to the right of the median line of the chest. The left lung was collapsed to one-fifth of its natural dimensions. "The vacant space was filled with air, and about fourteen ounces of turbid serous fluid. The pleura costalis and pulmonalis presented marks of inflammation of a few weeks' standing—viz. some thin false membranes, that were easily separated by scraping with the scalpel. There were no marks of any more recent pleuritis, even in the vicinity of the wound, there being only a slight ecchymosis between the pleura and subjacent cellular tissue, for the space of a few lines around the incision. A tube was inserted into the trachea, and air blown into the lungs. The left lung expanded to a certain extent, and air was heard to bubble out. The lung was then carefully removed, and an aperture was immediately recognized at the division or cleft between the two lobes." This aperture was circular, capable of admitting a crow quill, and was evidently fistulous, and of several weeks' standing. It communicated with a very small excavation formed by the softening down of some tuberculous masses, and into this small excavation a bronchial tube was seen to enter. The left lung presented some trifling tuberculation, but was not materially diseased. The right lung was much more tuberculated; but the tubercles were principally in a quiescent state. There was no other disease in the chest.

Thus was Dr. Johnson's diagnosis amply verified, and another fact added to the multitude already existing of the value and accuracy of auscultation and percussion, as diagnostic means. Dr. Johnson thinks that had the operation been performed when the pneumothorax was first ascertained, "and when the



difficulty of breathing was urgent—and had the aperture in the lung healed, as it probably would have done, his life might possibly have been saved.”—*London Medical Gazette*, January, 1829.

34. *Case of Pneumothorax in which an Operation was successfully performed.* By JOHN DAVY, M. D.—In connection with the preceding case, it may be interesting to introduce a notice of one related by Dr. Davy, in the *Philosophical Transactions*, for 1823, in which the operation was successful. A soldier was sent home invalided from the West Indies, for hæmoptysis, which had succeeded a severe fall on the left side of the chest, received eighteen months previously. He was admitted into the Military Hospital of Chatham on the 9th of May, 1823. On the morning of the 13th, after a violent fit of coughing, symptoms of pneumothorax came on suddenly, and continued increasing till the 21st. “The most prominent of these symptoms were, a feeling of extreme tightness about the chest and abdomen; rapid and difficult inspirations, between thirty and forty in a minute; great anxiety of countenance and agitation of mind, accompanied by a small pulse of 130; cold sweats, frequently breaking out on the neck and face; considerable prostration of strength. On examining the chest, the left side was found more protuberant, and, in all its dimensions, larger than the right; it was tense, and, on percussion, sounded remarkably hollow and tympanitic, giving the idea of its being distended with air. The heart was found beating under the right mamilla.”

Under these circumstances it was resolved, on consultation, to tap the chest, which was accordingly done in the following manner:—A trochar was attached to an empty bladder, and the parietes of the chest punctured between the eighth and ninth ribs, the integuments and intercostal muscles being previously divided with a scalpel. A little air only rushed out, and as it was concluded, from the symptoms continuing, that its escape had been prevented by adhesions of the pleura at the point which had been perforated, the operation was repeated next day. The puncture was now made just below the left papilla, when, on withdrawing the stilet into the bladder, a large quantity of air rushed out and distended it. The bladder was now separated. Air continued to rush from the chest for several seconds, “as if from a blow-pipe.” When this ceased, and when the air began to pass inwards during inspiration, the cannula was withdrawn, and the wound healed. The relief to the patient was sudden and great, and he continued to improve till the 17th of June, when the account closed. No farther history of the case appears to have been published. The heart was still felt beating on the right side, and “the fluctuation of a fluid was perceptible in the left.”

35. *Case in which two ounces of Sulphuric Acid was Swallowed.* By J. ORR, Esq.—A female, aged nineteen, of delicate constitution, in a fit of temporary alienation of mind, arising from hysteric sensibility, swallowed, February 4th, at half past nine o'clock in the morning, two ounces of concentrated sulphuric acid. It produced agonizing pain, occasional hysterical fits, accompanied by spastic rigidity of the muscles of the lower jaw, complete loss of speech, great and sudden sinking of the animal powers, weak and fluttering pulse, with paleness and extreme dejection of countenance. About two ounces of a mixture of carbonate of magnesia was, in a short period after her swallowing the acid, passed down the throat, part of which, however, was ejected by vomiting. A state of almost entire insensibility, with coldness of the extremities, supervened. Mr. Embleton saw her in this condition, and bled her. When Mr. Orr first visited her, which was at seven o'clock in the evening, he found “her lying in a state of insensibility and collapse, from the bleeding, but on the whole apparently much relieved. On pressure in the region of the stomach, more particularly at its cardiac orifice, she evinced a slight sense of pain; and I suggested the immediate application of leeches to the epigastric region, to be followed by a large blister on the same part. A large quantity of castor oil and a copious

enema were administered, and a decoction of linseed given as common drink. During the night she remained in a quiet state, but unrefreshed by sleep; the breathing was occasionally hurried and stertorous; and on the morning of the 5th, her pulse becoming more rapid, with increased tenderness and pain in the epigastrium, about sixteen ounces of blood were drawn from the left arm, and the oil and enemata repeated. During the night she had six or seven very copious stools, of a perfectly black colour, and highly fetid. She slept a considerable time, and soundly, during this day, but in the evening her pulse again rose to 140, was small and easily compressed, with increased tenderness and pain in the abdomen and throat, and slight pain at the 'basis cranii.' Another blister was applied to the thorax, and the tartar emetic ointment ordered to be rubbed into the neck, which occasioned considerable irritation of the external parts, and afforded the most decided relief.

"On the 6th she swallowed some arrow-root without much difficulty, and the tongue, which had become tolerably clean during the previous day, seemed to have been but partially injured, retaining the sense of taste to a considerable extent; the fauces, from being swollen and inflamed, became less painful, and many words were very distinctly articulated, and in a firmer tone. She had slight cough and sputa, mixed with muco-purulent matter, apparently from the upper part of the trachea, muscular power in that region having almost ceased since she swallowed the acid. She had two or three dejections during this day, of varied colour, but latterly more natural, and containing a good deal of bile. Pulse 131, and more equal; tongue cleaner; pain of head gone; sits up in bed, and is cheerful, and swallows with less difficulty.

"Feb. 7th.—Passed a good night; pulse 98, and firm; less pain in swallowing; very slight tenderness in the abdomen; ate some more arrow-root, and continues to drink linseed decoction, with gum Arabic dissolved in it. Had several stools of a more natural colour, and speaks with regret of her forlorn condition."

Feb. 8th.—Convalescent, and afterwards continued to improve.—*London Medical Gazette, Jan. 1829.*

36. *On the Treatment of Intermittent Fevers by the Sulphate of Quinine, applied to a Denuded Surface of the Skin.* By Professor C. SPERANZA.—In a great number of cases it is impossible to administer certain remedies, either from the difficulty of swallowing or the vomiting they produce, the insurmountable disgust which they inspire, or the youth of the patient; and in some instances it is probable that the liquids of the stomach modify the remedies introduced into this organ. Under these circumstances, the employment of medicines by the endermique method offers a very valuable resource. Professor Speranza has employed in this manner the sulphate of quinine, in the treatment of a considerable number of cases of intermittent fever. He relates, among others, five cases of tertian fever, which yielded immediately to the application of the sulphate of quinine, applied upon a surface deprived of the epidermis by a vesicatory. In all the patients the fever had existed for many days, without manifest local alteration, except two, which presented gastric symptoms. Without premising purgatives, a blister was applied at once, and in most of the cases, even the day of the fever: the sulphate of quinine was applied at the end of the access, or the commencement of the apyrexia. The arm was chosen to apply the blister to, as the most convenient for dressing: the skin was rubbed well with strong vinegar, to hasten the formation of the bulla produced by the blister; immediately after the epidermis was removed eight or ten grains of the sulphate of quinine incorporated in a small quantity of pomatum was placed on the denuded surface. By employing this method, the fever has most frequently ceased after the first application, without its being necessary to make a second. Not only fevers whose primitive type were tertian, but those which had originally been continued and become intermittent, were treated in this way with success. In no case did a relapse take place, which is so common after the administra-

tion of quinine internally. In some subjects in whom symptoms of organic disease necessitated the use of evacuants or topical applications after the disappearance of the fever, this last did not reappear during the course of the secondary treatment. The application of the blister during the febrile paroxysm did not produce any disorder of the urinary organs or irritation of the neck of the bladder.—*Archives Générales de Médecine, from the Annali Universali di Med. Nov. Dec. 1828.*

37. *Remarkable Case of Abdominal Dropsy.*—Dr. BARDSLEY relates, in the *Edinburgh Medical and Surgical Journal*, for April last, a case of abdominal dropsy in which the patient was tapped fifty-three times in six years, and one thousand three hundred and ninety-four pints of fluid drawn off. This patient was a female, aged sixty, and was first seized with swelling of the abdomen, after being exposed to wet and cold on a journey. The belly rapidly increased in size, and at length it became necessary to evacuate it by tapping. Her general health was unimpaired; the appetite good; the bowels regular; the secretion of urine scanty; the thirst regular; no cough. The patient's death was caused by an attack of dysentery.

When the ordinary remedies in ascites have been fairly tried during a *moderate length* of time, and the accumulation of fluid increases rather than decreases under their use, Dr. Bardsley thinks that it is of the first importance to direct *immediate* tapping, as affording the only chance of cure; he says that he has had many opportunities of witnessing the bad effects of unnecessarily delaying this operation.

What is particularly worthy of notice in the preceding case is the impunity with which the operation was so repeatedly performed; and the evidence it affords of the enormous quantity of fluid that may be formed at successive intervals in the abdomen, without occasioning any material derangement of the general health, for the only inconvenience the patient suffered was from the weight she had to support previously to each operation.

38. *Ergot of Rye in Chronic Uterine Discharges.*—Dr. MARSHALL HALL is of opinion that the ergot possesses considerable powers in controlling chronic uterine discharges. In a very severe case of menorrhagia, alternating with leucorrhœa, of four years duration, the ergot was given in doses of five grains four times a day, beginning just before the expected appearance of the catamenia, with the effect of retarding the catamenia and suppressing the leucorrhœa. In several cases of leucorrhœa he has used the ergot with decided success. The effects of the remedy are usually perceived at the end of five days; it is recommended, however, to persevere in its use for a somewhat longer period.—*Lond. Med. and Phys. Journ. May, 1829.*

39. *On the Utility of Cold Affusion in Cases of Poisoning by Hydrocyanic acid.* By Dr. E. F. G. HERBST.—Dr. Herbst has published in *Meckel's Archiv. für Anatomie und Physiologie*, some interesting observations and experiments on the utility of the liquor ammoniæ and cold affusion in cases of poisoning by hydrocyanic acid. This preparation is the most violent of all known poisons. From experiments it appears to act principally upon the nerves; its first effect is excessive excitation of the nervous system, whose powers it speedily exhausts; followed by paralysis, muscular flaccidity, insensibility, &c. which are the forerunners of approaching death. The liquor ammoniæ diminishes the effects of this poison, especially when given immediately after the acid, or where a dose not sufficient to produce death has been taken. But should some time be allowed to elapse, or the quantity of the poison be sufficient to destroy life, the effect of the ammonia is less powerful and less certain, and for the most part unavailing. When hydrocyanic acid is given in doses which would if not counteracted prove fatal, cold affusion, only two or three times repeated, Dr. Herbst says, is sufficient to prevent its injurious effects. But, if the dose has been more con-



siderable, the affusion must be copious and frequent; yet its efficacy will chiefly depend on its prompt employment. Cold affusion can be especially relied upon when used immediately after the acid, or during the convulsive stage, even as long as the eyes are insensible and immoveably fixed, the extremities stiff and extended, and the head thrown back. To this state there succeeds general relaxation of the muscles, the respiration becoming gradually imperceptible, the pulse slow, weak, and scarcely to be felt, and in an instant afterwards death supervenes. Even at this period of paralysis, cold water recalls the vitality ready to vanish. The muscles again contract and become hard, the extremities rigid, and every thing successively resumes its natural state. The experiments of Dr. Herbst fully confirm these observations.

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40. *Vapour of Iodine for the cure of Consumption.*—A letter from Dr. BERTON has lately been read before the Royal Society of Medicine, respecting the employment of the above named medicinal agent in cases of tubercular consumption. This mode of using iodine appears to the author to have a double advantage—not producing gastric irritation, and being also immediately applied to the diseased part. He produces the vapour by the application of sulphuric acid to the hydriodate of potash. Air loaded with this vapour does not excite the least irritation in the throat. Dr. Berton cites three cases in which this method was productive of good effects: in two of them the cough and expectoration were diminished, and the appetite improved, in the third, although the plan had not been long adopted, the relief was evident. Dr. B. very justly observes that a greater number of facts are still required to enable us to pronounce an opinion as to the real value of this medicine.—*Journal Hebdomadaire.*

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41. *Treatment of Burns by the Application of Flour.*—J. MARSHALL, Esq. Surgeon, recommends in a communication in the *London Medical and Physical Journal*, for April last, employment of flour as an application to burns. "This mild substance," he says, "is doubtless pre-eminent to all others hitherto in use, by imparting immediate ease to the inflamed and irritable surface; it rapidly heals by the scabbing process, in uniting with the discharge from the abraded cutis; and almost instantaneously forms a temporary semitransparent covering, thereby assisting the natural functions in restoring the epidermis. The advantage becomes evident by stopping a profuse discharge, and the tedious progress of ulceration. That remarkable substance, the animal gluten, peculiarly contained in wheat, seems in this instance to assist the rapid regeneration of the scarf-skin, and thus protects the cutis and rete mucosum. The surface of the body being wonderfully supplied by the extension of the cutaneous nerves in the form of a soft pulpy membrane, somewhat resembling the expansion of the optic nerve on the retina, readily affords, it is presumed, an explanation of the great violence offered to the system in all cases of extensive burn or scald.

"This topical remedy is equally suitable to either of these accidents, and perhaps eventually will be found useful in many other cutaneous affections. It has been recently tried by me in the case of an infant three months old, who laboured under an inflammation attended with ulceration, pouring forth an ichorous discharge: the parts affected were the lips and chin, the right groin, the scrotum, the inside of the right thigh and leg down to the toes. The result was most satisfactory: some parts healed in a few hours, and the whole surface in three or four days. The thickened state of the scrotum, although unavoidably exposed to the frequent irritation of urine, also yielded.

"When the flour has formed the artificial covering, the further application becomes comparatively superfluous; which is perceived by its rolling off."

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42. *Observations on the Blood.*—The *Edinburgh Medical and Surgical Journal*, for April last, contains some interesting observations by Dr. DAVY, on the question, "is the appearance of the blood, abstracted as a remedial means, a just

criterion in considering the propriety of repeating the operation of blood-letting?" He first considers the appearance and qualities of the blood, which are commonly supposed to be indicative of inflammation, and to warrant rather than forbid further blood-letting. They are chiefly the following:—An unusual degree of fluidity of the blood the instant it is drawn; unusual slowness in coagulating; and, when coagulated, being covered with a buffy coat, and cupped. Relative to these appearances and qualities of blood, experience seems to show that they are met with in the majority of cases of local inflammation, but with shades, differences, and exceptions, involving much difficulty and perplexity.

1. When the inflammation is violent, rapidly running on to suppuration, and very extensive, as attacking at the same time more than one texture, or only the same texture, but in different organs, the blood drawn is often neither cupped or buffed. This Dr. Davy has witnessed most strikingly in cases of peritoneal inflammation, either pure or complicated with inflammation of the mucous coat of the intestines, or with diffuse cellular inflammation.
2. In diffuse cellular inflammation he has often noticed that the blood coagulated as rapidly as when in health, and yet, being unusually liquid, exhibited a slight buffy coat, provided the vessel used for holding it was filled in a few seconds, and instantly put aside and allowed to remain undisturbed.
3. In ordinary cases of inflammation, as of the pleura and lungs, the blood drawn at the commencement of the disease is occasionally not buffed or cupped; but on repeating the operation the following day, the blood exhibits both these qualities.
4. In cases of inflammation of the mucous coat, whether of the air passages, or of the alimentary canal, the blood drawn sometimes shows the appearances and qualities enumerated, and sometimes not.
5. Experience does not seem to have established, even generally, any relation in point of degree between these appearances and qualities, and the intensity of the inflammation. Sometimes the buffy coat in the blood is very thick, and the crassamentum is much contracted, and the symptoms of inflammation are not violent, and the recovery is not long protracted; and sometimes the reverse of this occurs.
6. In a large proportion of fatal cases, fibrinous concretions, or polypi, as they were formerly called, corresponding to the buffy coat on blood drawn, are found in the heart and great vessels; and, as well as Dr. Davy can judge from his experience, as often when the lancet has been freely used, or only moderately, or not at all. The consideration of such facts deprives him of confidence in these appearances as indications for practice and the repetition of blood-letting, and induces him to conclude, that, as a criterion in this way, they cannot be pronounced just or safe.

Dr. Davy next considers the appearances and qualities of the blood, commonly supposed to be connected with a state of the system, as it were the opposite of inflammation, and not to warrant farther blood-letting. They are chiefly, as it is supposed, a very soft crassamentum, very little, if at all, contracted, or the blood remaining liquid, or the proportion of crassamentum to the serum being unusually small. So far as he is able to judge, these appearances and qualities of the blood are not proved by experience to be connected with the state of the system supposed.

1. In the remittent fever of hot climates, and in cholera morbus, both the common kind and the epidemic, the crassamentum of the blood drawn is generally softer than natural, and little, if at all, contracted, and yet blood-letting in these diseases is not generally injurious: it is often beneficial, and even when repeated.
2. Blood without fibrin in any disease is very uncommon. Dr. Davy witnessed it only in cases of pulmonary apoplexy, and that after death, in the cavities of the heart and vessels, but so soon after death, that it may be taken for granted, that it was not a *post mortem* change; that it existed previously, and was probably connected with, and partly the cause of, the fatal effusion. In such cases no one would have hesitated, if called in time, in abstracting blood, especially taking into consideration the plethoric habits of the individuals to whose cases he alludes, and their previous apparent robust health.
3. The proportion of the crassamentum to the serum being small, may often be witnessed in acute diseases in their ad-

vanced stage, or in acute diseases supervening on chronic, of long duration, or occurring to persons of great delicacy of constitution, of feeble health, and of valetudinary habits. In such cases, no judicious practitioner would think of using the lancet, unless he considered it urgently necessary; and then surely he would not be prevented using it, even if certain of the blood being below par in respect to the proportion of crassamentum it might yield. Lastly, there is another and extensive and most important class of diseases, (were a classification formed according to the appearances and qualities of the blood,) in which the blood, as far as we have learnt from experience, is not apparently altered, as in the continued fever of summer, differing but little from the ephemera, as in the early stages of synochus; and, as in apoplexy and tetanus, and many of the diseases strictly belonging to the neuroses, in the treatment of which, blood-letting is often useful, and sometimes indispensable. These considerations tend to support the former conclusion.

43. *Chlorine in Hydrophobia*.—There was a slight error in the notice in our last number, of the employment of chlorine in hydrophobia, by Drs. SEMMOLA and SCHÖNBERG. They administer the solution in doses of from two drachms to one ounce, mixed with a sufficient quantity of sweetened water, three times a-day for fifty days. At a temperature of 60°, Fahrenheit, one part of water, in volume, dissolves two of chlorine.

44. *Angina Tonsillaris, Variolous Angina and Œdema of the Glottis, cured by Insufflation of finely powdered Alum*. By A. LAENNEC.—The *Revue Médicale* for October last, contains a very interesting clinical report by Dr. Laennec of the Hospital of Nantes. Three of the cases there related tend to confirm the advantages of the treatment of angina pellicularis, or those inflammations about the throat, in which coagulable lymph is poured out, by insufflation of finely powdered alum. Dr. L. states that he has used this remedy in pseudo-membranous angina, and also in simple angina tonsillaris, and that in this last it has subdued the tumefaction of the tonsils with great rapidity, and has the advantage of preventing the tendency to relapse, which he says is so common when the disease is treated by antiphlogistics alone. In the angina produced by the propagation of the variolous inflammation into the larynx and trachea, and which often proves fatal, he also particularly commends the alum sufflation. Since he has treated it by this remedy he has never lost a patient by suffocation, and has often even seen the consecutive effects of the variola become less violent as the angina ceased and the respiration become easier. Finally, he has had recourse to this remedy in a case of œdema of the glottis, and with complete success.

45. *Gonorrhœa*.—"A formula, different from any in common use, has been recently recommended in cases of gonorrhœa and gleet, after other remedies, even cubes, have failed. It is this:—℞. Tinct. ferri muriatis, ʒj.; sp. æth. nitr. ʒvij. M. From forty to sixty drops to be taken three times a day, in distilled water. Copaiba may be substituted in the same quantity for the spirit. æther. nitr. should it be thought expedient to try that medicine.

"An exceedingly obstinate case of gleet is recorded in the eleventh volume of the *Edinburgh Medical Journal*, by Mr. Fletcher, which was cured by an injection of sea water. The patient had laboured under the complaint for two years. It was removed in ten days."—*Boston Journal*.

46. *On Small Doses of Oil of Turpentine for the cure of Sciatica and other Neuralgiæ*. By M. MARTINET, M. D.—"The employment of terebinthines, in affections of the nerves, is of very ancient date; but it is only in modern times that the essential oil of turpentine has been fairly put to the test of experiment in the neuralgiæ, of which sciatica is one of the most obstinate and intractable. M. Martinet has lately given an exposition of the results of his experience in seventy cases of SCIATICA, or other severe neuralgiæ of the extremities, where



the oil of turpentine was employed, but in small doses—namely, about a fluid-drachm in the twenty-four hours, and taken at three different times. In this way, it seldom acted on the bowels; but generally produced a sense of heat in the stomach, and throughout the whole line of the intestinal canal, and occasional perspiration. A similar sensation was usually experienced in the nerve affected. The vehicle of exhibition was honey, syrup, or, what was the best of all, a mixture of syrup and calcined magnesia. The yolk of an egg is also a good ingredient in the vehicle. Where the digestive organs were very irritable, a few drops of laudanum were added. The *modus agendi* of turpentine in the cure of sciatica, or of any of the neuralgia, is quite unknown, and, therefore, we shall not waste time in discussing that point. The RESUME of our author's experience with this remedy is as follows:—

“Of seventy patients who laboured under sciatica, or other severe neuralgia of the extremities, fifty-eight were cured—namely, three by frictions, and fifty-five by the internal administration of the turpentine. Ten experienced only a more or less durable relief—and five derived no benefit whatever from the medicine. Two out of these last laboured under disease of the hip-joint, under which they ultimately sank. Of these seventy cases, forty were acute, and thirty chronic. Of the forty acute cases, thirty-four were cured—five were relieved—and one received no benefit. Of the thirty chronic cases, twenty-four were cured—two were relieved—and four remained without any mitigation of their complaints. Of the fifty-eight patients who were completely cured, thirty-four were cured in less than six days—twenty-two within twelve days—and three within six weeks. Of these fifty-eight cures, forty-eight were cases of sciatica, two of which were cured by frictions. Three were crural neuralgia—four were brachial—and three facial. In the ten cases which were only relieved, (all of which were cases of sciatica,) the treatment was suspended after the second day. In twenty-one cases, heat was felt along the tract of the nerve and in the limb affected; and nineteen of these were completely cured. In eighteen cases, heat was felt in the stomach and bowels. Three were affected with vomiting—but these had taken a larger dose than usual of the oil. Three had diarrhœa and colic. In five instances the urine was augmented—four had dysury or strangury. In ten instances the perspiration was augmented. In one case a degree of intoxication was produced—and in two others a pruritus was experienced over the body.”—*Med. Chirurg. Rev. April, 1829, from the Revue Médicale.*

## OPHTHALMOLOGY.

47. *Complete Inversion of the Eyelids.*—When the inversion of the eyelid is moderate, the excision of a portion of the external integument, or the application of the sulphuric acid, so as to produce ulceration of the skin of the palpebræ, which when it heals produces contraction and draws the margin of the eyelids outwards, generally affords relief. But in the more inveterate cases, it has usually been the practice to have recourse to the excision of the margin of the tarsal cartilage as recommended by Mr. Saunders. This operation, however, always produces more or less deformity; and although it removes the perpetual irritation caused by the cilia, is sometimes followed by a thickening of the conjunctiva which excites considerable irritation of the eye. It very often also produces a constant epiphora, and the delicate margins of the tarsi being removed, the functions of the lids are in a considerable degree destroyed, while the elliptical cartilaginous borders, which give that firmness, regularity, and graceful curve to the palpebræ, are mutilated and disfigured.

Some years ago, Mr. Crampton, of Dublin, proposed another operation, which has been since improved, and strongly recommended by Mr. Guthrie; and in the *London Medical Gazette*, for January last, Mr. Stratford relates three cases,

successfully treated by this method. That the reader may the more readily understand this operation, we shall select the most important details of one of these cases. A gentleman, when young, had been subject to frequent attacks of conjunctival inflammation. When seen by Mr. Stratford, he had complete inversion of both lower lids to such an extent, that not only the cilia, but even the skin of the lid was brought in apposition with the conjunctiva covering the globe. "The cilia were folded up, or bent in such a manner as to bring them in contact with the conjunctiva, where it forms the reflection from the ball to the lid, and consequently was in some degree removed from the corneal portion of the membrane. The whole lid appeared to be very considerably elongated, so that when the cilia were returned to their proper situation it formed several considerable folds, while an evident stricture was formed by the contraction of the tarsal cartilage, that made it difficult to retain the lid in its proper situation, especially if any involuntary contraction of the orbicular muscle was excited. The patient complained that the inversion of the cilia caused very considerable pain, prevented his application to study, and, indeed, made his life miserable."

An operation having been determined upon, it was commenced "by introducing one limb of a pair of scissors, (with a blunt point,) to the bottom of the fold formed by the reflection of the conjunctiva, as near the external angle of the lids as possible, and, holding them in a perfectly perpendicular direction, cut through the skin, tarsal cartilage, and membrana conjunctiva. This evidently afforded considerable latitude of motion to the lid, and being repeated at the inner angle of the inverted lid, (taking great care to avoid the punctum lachrymale and horizontal canal,) obviously freed the part from that constriction which was a chief cause of the complaint. The cilia now, in a very considerable degree, returned to their natural situation. I next seized a large fold of the skin of the lid, and cut off horizontally a considerable portion of it. This was included between the two previous perpendicular incisions: after the bleeding had ceased, I passed an armed needle through the tarsal cartilage in three situations; the two first close to the perpendicular incisions, the last in the centre between these. I then fixed the ligatures to the cheek by means of adhesive plasters, so as completely to evert the lid. A little lint, besmeared with simple ointment, and a compress and bandage were now applied, and the patient enjoined not to disturb the plasters, &c. Very little irritation was excited by the operation; the wound, was dressed daily, and the ligatures were firmly retained in their situation. About the fourth day, adhesion had evidently taken place between the cut surfaces of the horizontal wound, while the perpendicular incisions were granulating. The ligatures came away about the ninth day, when the everted lid soon returned to its natural situation, without the least inversion of the cilia. At first there appeared some disposition to permanent eversion of the lid, but this entirely subsided as the thickening of the cellular tissue of the lid was absorbed. The patient now freely expresses the very sensible relief which he experiences from the previous continual annoyance, which he purchased at the expense of a little pain, but certainly without any of the personal deformity which the excision of the tarsal margins must have produced."

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48. *Cataract completely formed in a few hours.*—Dr. WENDELSTROM relates in the *Arsberättelse om Svenska Läkare Sällskapets Arbeten*, for 1827, the case of a robust peasant, aged sixty, who enjoyed excellent health, suffering only occasionally from slight attacks of gout, eye sight very good, who while felling wood, experienced a dimness of sight, which gradually increased, and within a few hours terminated in complete blindness. He had not the slightest pain or external inflammation. He was seen by Dr. W. a few days after this occurrence, at which time both lens were opaque and were extracted.

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49. *Ossification of the Vitreous Humour.*—Among the organs of sense, the eye alone presents examples of ossification. The choroid membrane is the part which

most frequently undergoes this change: in cataract the degree of induration is scarcely ever such as to warrant the appellation of bone. Haller asserts that he has seen the retina ossified, or at least an ossific lamina occupying the place of this membrane; and the same statement is made by Morgagni, Scarpa, Magendie, and Manoury.

No author, however, has recorded a genuine case of ossification of the vitreous humour. Lobstein, it is true, in his *Pathological Anatomy*, says, that ossifications of the hyaloid membrane are asserted to have occurred; but he cites no authority, and appears to doubt the fact. Scarpa says the hyaloid is occasionally opaque, and thicker than natural; and Morgagni speaks of it as sometimes cartilaginous. Beer mentions having found earthy matter in the interior of the vitreous humour, and occupying its place.

M. Kuhn, however, has lately met with a well marked case of ossification of the vitreous humour, the preparation of which is deposited in the museum at Strasbourg. It occurred in a man aged seventy, who had died of inflammation of the stomach. The left eye was healthy, but the right eye was in the following state:—The globe had sensibly diminished in size—it had lost its spherical figure, and presented the appearance of four furrows or wrinkles, which corresponded with the insertion of the recti muscles: it was heavy, and felt hard. When a horizontal incision was made from behind forwards, the sclerotic was found to be very thick, particularly at its posterior part, near the entrance of the optic nerve: the instrument was soon arrested by a hard body, filling the whole space of the eye-ball behind the crystalline lens, and consequently occupying the place of the vitreous humour. Immediately within the sclerotic was the choroid membrane distinct, and rather thicker than natural. The retina was unchanged. The solid body within was marked by the same depression which had been observed externally; it was of a pale white colour, and was internally of a cellular texture, like the cancelli of the long bones. The crystalline was indurated, and of a yellowish white colour; the optic nerve was wasted.—*La Clinique*.

50. *On the Operation for Cataract*.—Dr. ZEUSCHNER, in a long paper in *Rust's Magazin*, for 1827, offers as the result of extensive experience, some new views respecting the operation for cataract by extraction. Although we are by no means satisfied of the correctness of these views, yet as they are presented in an imposing manner, being founded on extensive experience, we think it our duty to lay them before our readers. According to Dr. Z. the success of the operation of extraction of the lens, depends chiefly on the following circumstances. 1st. The operation should be performed on a dull day, or in a room open to the north, and not much exposed to light; this will he says sufficiently dilate the pupil. The customary method of effecting this by the application of narcotics, produces sometimes paralysis of the iris. 2d. After the removal of the lens, attention must be paid to remove the air bubbles which may have entered into the anterior chamber during the operation, and which may be effected by means of Daviel's spoon. This Dr. Z. considers very important, for if neglected he says the air bubbles are confined behind the cornea, and expanded by the animal heat, causing traumatic inflammation, which destroys the eye. 3d. The eyelids must not be closed after the operation by plasters; but the lower lid should be drawn down, which he effects by applying one end of a strip of adhesive plaster to the edge of the lid, then drawing it down, and applying the other end to the cheek. The supposed advantage of this is, that the tears and the aqueous humour may flow from the eye freely, and that it enables the surgeon to remove the plastic matter, which forms during the healing process from the cut edges of the cornea, and which, if not removed, acts as a foreign body, frequently occasioning inflammation. The objections that may be urged against this practice, viz. that it gives rise to a prolapsus iris, and the evacuation of the vitreous humour is, Dr. Z. asserts, entirely groundless. The upper lid, when moderately closed, prevents this sufficiently. Dr. Z. says that he has operated in this



manner on several hundred patients with the greatest success, and can prove this by credible witnesses. It is proper to add, that Dr. Z. is esteemed in Germany as a man of great integrity, and his opinions are valued as high authority.

## SURGERY.

51. *Compound Fracture of the Olecranon.* By H. EARLE, Esq.—Anchylolysis frequently follows compound fractures extending into joints, and a most important practical question therefore arises, in what position such a fracture as occurred in the following case, should be placed? “A choice of evils presents itself to the practitioner—whether the limb should be placed in the extended position commonly employed in simple fracture of this part, by which the fractured surfaces may be closely approximated; but in the event of suppurative inflammation, the joint may become immovable in a position which renders it nearly useless—or whether the limb should be bent to a right angle, by which the fractured ends would be widely separated, but in the event of anchylolysis, the limb would be useful for all the common purposes to which it is applied.”

Mr. Earle presents the following case as a good practical illustration of the propriety of attempting to unite the bone in the position most favourable to adaptation, and at the same time combating all the inflammatory symptoms with the most active treatment. Should the inflammation, however, continue, and the discharge clearly indicate extensive ulceration of the cartilages, Mr. E. thinks that it would be the duty of the surgeon to place the limb in such a position as would be most serviceable in the event of anchylolysis taking place.

A man aged twenty-three, was admitted into St. Bartholomew's hospital, on the 1st of December, with a compound fracture of the right olecranon, produced by a blow on the elbow, from a poker, while in the act of raising his arm to defend his head. A small artery was divided, which bled very profusely. When admitted into the hospital, the olecranon was slightly retracted to the upper part of the posterior fossa of the humerus. The wound was accurately closed, and the hemorrhage readily restrained by a compress. The external wound was rather below the seat of the fracture. Mr. Earle visited him a few hours after his admission, “at which time the olecranon was not in the least retracted, though it could be moved laterally in its proper cavity. The arm was placed on a pillow, extended to about an angle of 160 degrees, and was enveloped in cloths wetted with the coldest water. Cal. gr. iv. pulv. jalapæ. gr. xv. were given to him, and the strictest rest and an antiphlogistic regimen enjoined.

“On the 2d, extensive swelling and inflammation of the whole arm had taken place, with great pain in the joint. He was bled from the arm, and 30 leeches were applied round the joint. The cal. and jalap were repeated. As he complained of the cold applications, warm fomentations were substituted, from which he experienced much relief.

“3d.—The swelling was somewhat reduced, but he complained of excessive pain in and about the joint, and he had frequent convulsive twitchings in the arm, which disturbed his rest. A long splint was applied in front of the arm, with an additional pad at the flexure of the elbow, to maintain the exact degree of flexion which I have found best adapted to these cases, and which I have particularly advocated in a paper on this subject published in 1823. The wound had not united, and discharged a thin fluid resembling synovia. The bursa over the olecranon was much distended with fluid, and around this the integuments were very shining and inflamed. Being apprehensive of extensive cellular inflammation, which so frequently attends on suppuration of the bursa, I made a free incision, and let out about half an ounce of turbid fluid. This afforded great relief, and there was no further irritation from this source, the wound readily healing in a few days. Thirty more leeches were applied round the joint.

"4th.—He still complained of much pain in the joint, which continued to pour out turbid thin synovia in abundance. Thirty more leeches were applied in the morning, and twenty again at night, and the limb was constantly fomented. His bowels were kept open, and fever diet continued.

"On the 6th the swelling and inflammation were much reduced; the discharge continued very abundant.

"From this day until the 10th he continued to improve, and could bear the surfaces of the joint to be pressed gently together, and the radius to be pronated and supinated without any increase of pain. On this day, (the 10th,) some purulent matter was mixed with the thinner discharge of synovia. I had constantly watched the appearance of the discharge, having determined, if a copious purulent secretion took place, accompanied with obstinate inflammation in the joint, indicating ulceration of the articular cartilages, that it would be right to disregard the separation of the broken bones, and to alter the position of the limb to a state of more perfect flexion. The puriform discharge was, however so small, and the inflammatory action had so much subsided, that I did not consider it necessary to make this alteration.

"The discharge from this time gradually diminished, and the wound closed in about three weeks from the receipt of the injury. During this time he had twice a return of pain in the joint, but this readily yielded to the application of leeches. Slight passive motion, particularly of the radius was commenced about the twentieth day, and gradually increased. The olecranon has united so firmly and perfectly, that it requires a most accurate examination to detect the line of fracture. He has at present the power of perfectly extending the arm and bending it to a right angle, and he is daily gaining freer motion and greater power in the joint. In supinating the radius with the arm bent, a slight grating sensation can be perceived, which causes some pain, which probably arises from partial absorption of the cartilage."—*London Medical Gazette*, Jan. 1829.

52. *Sinuses in the Region of the Pelvis.* By JAMES SYME, Esq.—Obstinate sinuses are met with no where more frequently than in the region of the pelvis. Those which remain after the opening of abscesses depending on carious vertebrae, or caries of the hip-joint, are incurable, and being of common occurrence have led to the opinion that little can be done for the remedy of any sinus thus situated. Mr. Syme has published, in our respected cotemporary the *Edinburgh Medical and Surgical Journal*, for April last, the histories of four cases, which show that the sinuses in question sometimes depend not on caries, but on death of bone, which exfoliating in some part of the pelvis far from the surface, causes continued irritation by the presence of the loose portion. Hence it is proper, in the treatment of all sinuses in this part of the body, not obviously proceeding from caries, to search for such exfoliations, and remove them if they are found to exist. We select the second case.

A cooper, aged twenty-eight, about seven years before he was seen by Mr. Syme, after long and severe exercise of the muscles of the thigh, perceived a sense of uneasiness in the right hip. Soon afterwards a collection of matter formed here, and was evacuated by a surgeon, who informed him that he laboured under a *fistula in ano*. "Having undergone various incisions, &c. he was told that his complaint was not a *fistula in ano*, and would require time for its cure. He then applied to a quack, who tortured him in various ways too tedious for description. Returning to the regular faculty, he employed a distinguished surgeon of Edinburgh, who opened some large abscesses which formed in the thigh lower down than the original one; but finding that his complaint, though alleviated, was not cured, he determined to abjure all surgical interference for the future, and leave the affair to nature. In conformity with this resolution he permitted the disease to take its own course for several years, working at his business when not prevented from doing so by pain, &c. At last, about two months before the time I saw him, his sufferings became so

excessive as to induce a departure from his plan, and he sought the assistance of a surgeon who had attended him in an early stage of his case. This practitioner found a piece of bone sticking at the orifice of a sinus and removed it; but having ascertained that there was more to come away, he tried to dilate the opening by sponge tent. The patient, in consequence suffered more than ever from the pressure of the sponge and confinement of the matter. On one occasion the tent slipped in, and required an incision for its removal, which naturally suggested to the patient that the bone might have been more easily extracted in the same way; but such a proceeding not being, I suppose, in accordance with the rules of *systematic surgery*, the tents were persevered in, until the patient, reduced to despair, determined on a change of men if not of measures, and applied to me.

"I found a large diffused abscess occupying the upper and back part of the thigh, and extending from the hip half way to the knee. In the fold which lies between the hip and thigh there was an opening, which allowed the probe to enter fully three inches in the direction of the tuberosity of the ischium, and at the bottom of this passage I felt a loose piece of bone. The patient was pale and emaciated. Owing to weakness and pain he walked with difficulty; and the long duration of his complaint, together with its progressive aggravation, rendered him very desponding as to the possibility of recovery.

"I made an incision into the abscess, and allowed several ounces of pus to escape. Next day I introduced a long straight probe-pointed bistoury into the sinus, and dilated it to the bottom so as to admit my finger, by means of which I discovered that the exfoliation lay in a cavity between the origins of the flexor muscles of the knee. Having dilated the mouth of this cavity with my knife, I easily extracted the bone, which was about the size of half a sixpence.

"The patient suffered no bad consequence from this operation, and soon found himself relieved from all his previous complaints. In the course of two or three days he walked nearly a mile to my house, and by the end of two or three weeks was able to resume his occupation.

"Some months afterwards he told me that the sinus still discharged a drop or two of matter, and that he occasionally felt a pricking pain at the bottom of it. I examined with a probe, and ascertained that there was a loose fragment of bone, to remove which I again dilated the sinus down to the tuberosity of the ischium; again felt that the exfoliation lay in a cavity between the tendons; and again enlarged the cartilaginous orifice so as to effect the extraction. The piece of bone now removed was extremely small, not much larger than a barley-corn. The wound healed directly, and the patient has remained free from complaint."

53. *Case in which the operation of Lithotritie was Successfully Performed.*—We are happy to learn from the April number of the *Edinburgh Medical and Surgical Journal*, that ROBERT LISTON, Esq. of Edinburgh, has successfully performed, in the Royal Infirmary at Edinburgh, the operation of lithotritie. A man, aged seventy, had been for five months labouring under the symptoms of calculus, and the existence of a stone was ascertained by sounding. As the patient had a great aversion to being cut, and as his urine seemed to indicate a diseased state of the bladder, it was thought advisable to break down the stone in preference to the usual operation.

"On 13th November, a solution of opium having been injected into the bladder, Mr. Liston introduced Civiale's instrument, but owing to the restlessness of the patient, and the irritable state of the bladder, did not succeed in grasping it completely. Several small portions of stone, however, came away in the fangs of the instrument, and during the night. He suffered no inconvenience from the operation. On the 15th he passed a barley-corn incrustated with calcareous matter. On the 16th, a piece of straw with the same incrustation. He complained of pain in the testicles. On the 18th, a small abscess having formed in the scrotum was opened.



"The instrument was again introduced on the 25th. The stone was fairly laid hold of, but was so soft that it was crushed by the instrument, on withdrawing which several fragments of seeds were found adhering. He now confessed, that, while reaping during the last harvest, he had introduced a number of barley-corns into his urethra, but would not say for what purpose.

"The patient had repeated attacks of retention of urine after last operation, from the large portions of stone lodging in the urethra. He passed in all thirteen fragments having entire barley-corns for their nucleus, besides a much greater number having only small pieces of the beards. He had now little pain, and the quantity of mucus in his urine was inconsiderable. He was sounded several times, and, as nothing was felt in his bladder, he was dismissed cured, on the 16th December, 1828."

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54. *Edema of the Glottis relieved by Tracheotomy.*—A woman aged forty-two, entered the Hôpital de la Charité, January 25th, with dyspnoea, hissing respiration, and the usual symptoms of angina oedematosa; skin hot; pulse 140. "Sixteen ounces of blood were taken from the arm, and immediately followed by the application of leeches to the neck. The next day the symptoms were relieved, although the pulse still continued very frequent. M. Chomel, on examining the throat, perceived that the epiglottis was red and swollen, with some white spots on the left side; and it appeared now to have become a question whether the case was one of oedematous angina, or of false membrane. An emetic was ordered, but without exciting vomiting, and forty leeches were applied to the throat. For the next two days the symptoms continued without any material change, but on the third the respiration became more difficult than hitherto, being sonorous during expiration as well as inspiration. Another large bleeding, and the application of leeches, were once more had recourse to, but on this occasion without benefit. The difficulty of breathing gradually increased, and by five o'clock in the afternoon suffocation appeared to be impending. M. Chomel sent immediately for M. Roux, when it was agreed to perform the operation of laryngotomy. The incision was made in the interval between the cricoid and thyroid cartilages, and continued down to the membrane. A vessel, apparently a vein, bled so freely, that M. Roux was obliged to suspend the operation, with a view of tying it. The patient, however, who up to this time had breathed with difficulty, now ceased to do so, the pulse was lost, and life appeared extinct. M. Roux, regardless of the flow of blood, instantly plunged the knife through the crico-thyroid membrane, making a large opening, into which, however, the blood only flowed, and the chest still remained without movement. M. Roux then introduced a sound, and repeatedly forced air from his own lungs, and drew it out again with part of the blood. After this artificial respiration had been kept up for a few minutes, the patient made a slight movement, and natural respiration was gradually restored; the sound was removed, and a silver canula introduced in its place, sufficiently large to fill up the aperture in the larynx, thus preventing the blood from being able to flow into it. On the 12th of February, a fortnight after the operation, the patient had begun to breathe by the larynx, the wound in which, however, was still kept open."—*Lond. Med. and Surg. Journ. April, 1829.*

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55. *Case of Hernia, in which a Fold of Intestine was contained in a Sac between the Abdominal Muscles and the Peritoneum.* By HENRY EARLE, Esq.—A strong healthy man, aged thirty-five, had been ruptured on both sides when about five years old, in consequence of a heavy boy sitting down on his abdomen, when he was lying on the floor: both herniæ had protruded very suddenly and at the same time. He had constantly since he was ruptured worn a double truss, and conceived that he had always been able to return the herniæ. On the morning of the 18th November, 1828, "on lifting a heavy weight, he felt a pain in the right hernia, the truss being on at the time. No sensible external swelling could be felt at the moment, on removing the truss. The pain conti

nued increasing throughout the day, and was aggravated on attempting to empty the bowels. Gradually the swelling took place, or, as he supposed, the hernia descended; and, as he could not replace it, he sent for his medical attendant very early on the morning of the 19th. Bleeding, purgatives, and the taxis, were employed in vain; and, as the abdomen was becoming very tender, accompanied with vomiting and constipation, I was requested to see him. On examination, the tumour, which was about the size of a hen's egg, was not very tense, and, on very slight pressure, part of its contents receded within the abdominal ring, but immediately returned on remitting the pressure. As the symptoms were very urgent, I recommended an immediate operation. On laying bare the hernial sac, it was at once apparent that no stricture existed at the external ring, which readily admitted my little finger before the sac was opened. On opening this cavity, a considerable quantity of reddish turbid serum escaped, and the sac collapsed, without any omentum or intestine being apparent. On passing my finger through the external ring, within the sac, I found a large fold of very dark-coloured intestine, to the extent of about seven or eight inches in length, curled round behind the abdominal muscles, and separating them from the cavity of the peritoneum. The space occupied by this portion of gut extended nearly to the symphysis pubis in one direction, and outwards for some distance towards the internal ring, below; the sac and its contents rested on the external iliac vessels. It required some time and consideration satisfactorily to make out the nature of the hernia, and the plan required for its return. As the external ring was very large, I brought out the coil of intestine, after dividing the whole extent of the external portion of the sac. I then found that the hernia was a direct hernia, the spermatic cord lying on its outer side. At the full extent of my forefinger, introduced through the external ring, I could feel the neck of the sac very closely surrounding the gut—so closely, that I could not succeed in drawing down any fresh portion of intestine. Much caution was required in dividing the neck of the sac, in consequence of the very urgid state of the gut within the ring; and I experienced considerable difficulty in consequence of the curved form of the common hernia knife, which would not admit of my employing it with safety at so great a depth, without dividing the external ring to some extent. This difficulty would have been readily overcome if I had been prepared with a narrow straight knife, made on the same principle as the common probe-pointed hernia knife; which I could with facility have carried down to the stricture, with its flat surface in contact with my finger. After freely dividing the neck of the sac, and drawing down a fresh portion of gut, I was enabled to return the whole; when the circumstances of the peculiar nature of the hernia became still more evident, as there remained a large cavity behind the lower margin of the abdominal parietes, the peritoneum being pushed up by the hernial sac. The course of the spermatic cord, and the epigastric artery on the outer side of the hernia, could be distinctly felt, and the iliac vessels below could be traced for some distance. It was necessary to employ a very large compress to fill this cavity and prevent the escape of the gut. The patient was directed to take only a few spoonfuls of gruel occasionally, and to have clysters thrown up. In the evening some leeches were applied round the neighbourhood of the hernia. Stools were procured before morning, the patient had no bad symptoms, and recovered in the course of ten days."

This hernia appears to have been produced by the direct application of pressure on the abdomen, and to have taken place through the external ring, without descending along the course of the spermatic cord. The patient was in the constant habit of wearing a truss, and when protected with this he was able to carry very heavy loads. Mr. Earle thinks it probable that the neck of the sac became contracted, and the pad of the truss not permitting the escape of the gut through the external ring was the cause of the hernia diffusing itself between the peritoneum and abdominal parietes. When the gut first became strangulated there was no external tumour, which gradually formed on removing the

truss, in consequence of the effusion which took place within the sac. "This explains the slight degree of resistance afforded by the tumour, and apparent recession of a part of its contents within the abdomen—a deceptive circumstance, well calculated to mislead, and to induce a practitioner to delay an operation." But Mr. Earle adds, experience has long since convinced him that there is little danger to be apprehended from the operation, when performed in time. In 1828, he states that he has "operated on nine cases, and did not lose a single patient, and in not one of these cases would it have been possible to have returned the hernia without operation, whilst, in some of them, a very few hours delay must infallibly have proved destructive."

The surgeon should always ascertain, by introducing his finger, that the gut is actually replaced in the cavity of the peritoneum, as it is possible that there may exist a sac behind the external ring between this and the peritoneum, and that the neck of this sac may constitute the stricture.—*London Medical Gazette*, May, 1829.

56. *On the Reduction of Hernia.* By M. DUPUYTREN.—The means of reducing hernia are various, and more or less efficient. The application of the hand, or taxis, is the most methodic and advantageous; it is modified according to the kind of hernia, its size, and other circumstances. Among the empirical methods adopted for the same purpose, there is one which approaches to this. The patient being laid upon his back, the feet are raised as high as possible, leaving the head and shoulders upon the ground; the weight of the viscera in the abdomen acts upon the portion of bowel in the hernia, dragging it towards the interior, sometimes effecting the reduction. Here there is a mechanical action, not from without, inwards, as in the taxis, but in an opposite direction. Various topical applications are made to strangulated hernia; some of these, as cold water, &c. are intended to diminish the volume of the parts in the sac. The action of cold produces several effects; it increases the tone of muscular parts, often, indeed, giving rise to sudden contractions, capable of overcoming the obstacle which has been opposed to the passage of the intestinal contents; so that strangulated hernia are sometimes speedily reduced by the affusion of very cold water. Ice, applied with perseverance, condenses the liquids and gas, and thus also facilitates their return into the abdomen. Other local applications appear intended to act upon the secretion of the mucous membrane of the part; such as cataplasms of senna, gratiola, &c. These are asserted to have good effects in the cases of elderly persons, in whom it is well known that the slowness of the peristaltic motion more frequently occasions overloading than actual strangulation; a circumstance which must be kept in mind, that we may not trust too much to these measures where the patient is young, and the case one of genuine incarceration. As experience has demonstrated that the manner in which purgatives act is by facilitating the expulsion of the contents of the hernia, it may be asked why more active substances are not employed; for example, the croton oil?

The nausea and vomiting so frequently present in such cases, does not always contraindicate the use of purgatives, as they sometimes succeed when more methodical treatment has failed. With regard to enemata, they ought never to be omitted unless there be evident symptoms of inflammation.

Some local applications are intended to produce relaxation at the point of strangulation; thus the extract of belladonna has recently appeared to produce good effects in the hands of M. St. Amand.

The rapid sinking of the patient frequently produces the relaxation favourable to the reduction of the hernia. This is effected by means of copious general bleeding; the application of leeches to the tumour; and long-continued immersion in a warm bath; means which in general are not employed with sufficient energy. These observations show, that the operation is not the only resource in such cases; but it is a very important point that the operation be not delayed after its necessity has become obvious. A consideration of all the



circumstances can alone lead to a satisfactory conclusion. The following case will show that at the Hôtel Dieu other means are tried before operating.

"A woman, aged fifty, had laboured under crural hernia of the right side for more than ten years. It frequently became obstructed; but repose, the horizontal posture, and the taxis, had always sufficed to restore it. On the 24th of February, after some efforts to carry a load, the tumour suddenly became the size of a small egg, and symptoms of strangulation manifested themselves with violence. The usual methods to produce reduction were adopted without avail. Next day she was brought to the hospital, when she was bled from the arm, the tumour covered with leeches, and she was put into a warm bath, where she remained nearly two hours. At the end of this time faintness came on, when the 'interne' took the opportunity of applying the taxis, by which means he entirely reduced the hernia."

M. Dupuytren stated, that at the Hôtel Dieu they succeeded in reducing only one-third of the herniæ brought to them, while in civil life at least two-thirds were reduced. Among the causes of this difference, the principal is, that those cases in which reduction has already been attempted without success are generally sent to the hospital. In the better ranks of life the causes of strangulation are much less frequent; the patients much more ready to call in assistance. If we are in haste to operate on such individuals, some of those who die might possibly be saved; but at the same time we run the risk of practising an operation which is not called for. Besides, there is never more than twelve hours between each visit; and it is generally in this interval that reduction takes place. Prudence, therefore, requires that we ought not to be in too great haste; and experience proves that gangrene of the intestine neither comes on so easily nor so soon as is generally said. We are now less imposed upon by the brown colour which the organ assumes in consequence of the constriction; and knuckles of intestine are now replaced in the abdomen, the appearance of which would formerly have been regarded as indicating the necessity of establishing an artificial anus. It is necessary, then, to multiply the means of reduction; to persevere as long as possible in their employment, and only to despair of their success when the continuance of the local mischief, and the increase of the general symptoms, give rise to well-grounded apprehensions.—*Clinical Lectures of M. Dupuytren, La Clinique.*

57. *Secondary Hæmorrhage.*—Mr. Hodgson, in his valuable work on the Diseases of the Arteries, observes that secondary hæmorrhage occurs at two periods after the application of a ligature to an artery:—either within a few hours after the operation, or between the sixth and the thirtieth day, when the ligature may be expected to be detached from the vessel. A case of aneurism of the posterior tibial artery is related in the *Midland Reporter*, in which the femoral artery was tied; in this instance secondary hæmorrhage did not occur until the forty-second day from the operation, and twenty-four days after the ligature had come away. Dr. Johnson mentions, in his Journal for April last, that he has seen a nearly similar case. It was that of a patient with popliteal aneurism, whose femoral artery was tied in the thigh. "In twenty-one days the ligature came away, and a fortnight after that uncontrollable secondary hæmorrhage occurred. The common femoral was then secured, and thirteen days exactly after the separation of this second ligature, secondary, and ultimately fatal, hæmorrhage ensued."

58. *Ununited Fracture of the Femur, successfully treated by the Seton.* By Dr. DOHLDFORD.—This case, which is related in the Report of the Medico-Surgical Institution at Madgeburgh, was that of a man aged twenty-four, of very healthy constitution, who broke his thigh-bone near the middle. At the end of ten weeks, no union having taken place, bandages, splints, and a variety of remedies were tried; but these failing, he was, in September, admitted into the Medico-Surgical Institution, under Dohldorf. On the 3d of October, Dr. D. intro-

duced a seton between the ends of the bone, this was followed by so considerable a degree of inflammation, that it was found necessary to remove the seton on the 11th; suppuration was very profuse, and a great many fistulous abscesses formed beneath the muscles, so that the success of the operation, and even the life of the patient, was despaired of; at the end of a month, however, reunion of the fracture began to take place; the wound from the operation, and the abscesses, healed, and at the end of December, a very firm callus had formed. The deposition of the bony matter, which, from this period became too copious, was diminished by compression; and at the beginning of May, both limbs were of equal length, and, except a slight muscular weakness in the limb, the patient was perfectly cured.

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59. *Extirpation of a Cancerous Tumour situated in the Interior of the Rectum: Cure.*—M. MAURIN, adjunct surgeon to the Hospital of Versailles, has performed this operation successfully upon a person thirty years of age, who had suffered from the disease six months, and in whom the touch manifested a tumour in the rectum, of an oval form, and about three inches above the anus. It was hard, irregular, ulcerated, moveable, accompanied with severe lancinating pains, and formed a very great obstacle to defecation. The sphincter was cut at its posterior part to the extent of five or six lines, by means of a curved probe-pointed bistoury, directed by the index finger into the anus. The tumour being seized with hooks was by gentle and gradual means drawn outside, and its adhesions cut with scissors curved flatwise. The tumour, having an oval form, a little flattened, was above two inches in length, ulcerated at its unconnected surface, and apparently arising from the thickest part of the mucous membrane, since there was no portion of muscular coat upon the part excised. An abundant hæmorrhage followed the operation, which, however, was arrested by plugging. The bleeding removed the tendency to inflammation which appeared, and in about two months the patient left the hospital perfectly cured. Care was taken in the dressings subsequent to the operation, to introduce a large tent of lint into the intestine.—*Nouvelle Bibliothèque Médicale, February, 1829.*

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60. M. LISTRANC's *Treatment of Elephantiasis*.—This consists, 1st, in reducing the nourishment one-fourth part, then a third, and, finally, one-half: 2nd, in the employment of blood-letting, or application of leeches. Anti-phlogistics persevered in until the inflammatory symptoms are entirely dissipated. After this, he has recourse to compression. When these means do not succeed, he applies numerous vesicatories, or resorts to scarifications, making one hundred at a time. In one case, the number of these amounted to three thousand.

But to insure success it will be necessary to use great numbers of leeches every time that inflammation supervenes. If this inflammation be of the erysipelatous kind, it must be left to run its course, at least if it be not too violent, (in which case leeches and anti-phlogistics will be required,) since experience has shown that this form of inflammation is favourable to the resolution.—*Ibid.*

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## MIDWIFERY.

61. *Expulsion of the Placenta, Three Months after Abortion.*—MR. THORNTON relates, in the *London Medical Gazette*, for February last, an instance of this, which occurred in a lady who aborted at a little beyond the fifth month. The placenta did not come away with the embryo. The lady continued in an indifferent state of health for the next three months, when, after taking a ride on horseback, she was attacked with slight pains and a uterine hæmorrhage, which were followed by the expulsion of the placenta. It weighed seven ounces; substance hard; shape and size of a good pear; appearance dark and livid. The

following spring the lady became again pregnant, and has since had several children, and enjoys good health.

62. *Delivery of a Fœtus through the Abdominal Parietes.* By Dr. MÜLLER.—“A female, thirty-three years of age, feeble in constitution, and of middle stature, in the advanced stage of her first pregnancy, fell from the height of a story on a stair. After recovering from the fainting fit, which was the cause of her fall, she felt violent pain in the lower belly, and had considerable uterine hæmorrhage. These affections were removed by antiphlogistic treatment; but left her in a state of extreme debility. Four weeks after the accident she was seized with severe contracting pains like those of labour; and on manual examination, it was found that the *os uteri* was puffy and open. The apparent labour, however, did not make any progress. There was at the same time a copious discharge of sanguinolent mucus, constant sickness, extreme prostration of strength, hurried pulse, general paleness, and uninterrupted perspiration. The patient had never observed any movement of the fœtus after she met with the fall. Several days having been passed in these unfavourable circumstances, an inflammatory tumour suddenly appeared in the region of the umbilicus, accompanied with most acute pain and an intolerable sense of burning. The passages continued moist, but the *os uteri* did not increase in openness. Seven days after the false labour pains appeared, the tumour opened and discharged a moderate quantity of fetid pus. In the course of the same day, when the aperture had attained the diameter of an inch, the hip of a fœtus presented itself. This was in so advanced a state of putridity, that it was easily separated from the body; but it was with difficulty extracted from the opening. The thigh and foot followed, and after them the chest, of which the ribs, sternum, and clavicles were successively removed with a pair of lithotomy forceps. The arms were next extracted, then the bones of the head, after being broken down with the crotchet; and, in short, every bone of the fœtus was withdrawn from the same opening. A slimy membrane, and a light, spongy, cheesy mass in small portions of various sizes, consisting evidently of the placenta and membranes, were in the last place separated. During the progress of this extraordinary delivery, which lasted two hours, the uterus contracted occasionally with considerable force. The patient suffered much from the irritable state of the abdominal aperture. The sore was dressed with dry lint, after an injection had been used of tepid water and chamomile infusion, *which passed through the vagina*. The lochial discharge flowed partly through the natural passage, partly through the aperture in the abdomen. Under the use of generous diet, the patient, notwithstanding her unpropitious condition, gradually recovered. The discharge, which had at first and for some time an insupportable stench, gradually lost its odour; the wound in nine days had closed so far as only to admit a quill; and the secretion of milk receded. The patient's appetite and sleep continuing good, and her mind calm and cheerful, her farther recovery proceeded with rapidity; in six weeks the opening was healed up altogether, and she was able to resume her household occupations in her usual state of health.

“Dr. Müller, in his remarks on the nature of this case, endeavours to establish that it was not an instance of extra-uterine gestation, but of ordinary pregnancy; that the accident must have excited inflammation and suppuration of the anterior surface of the uterus; that this disorder passed by continuity of surface to the abdominal parietes, and gave occasion to the false passage. This certainly appears the only rational account that can be given of the progress of the case. The complete recovery of the patient in such disastrous circumstances is certainly, as the author observes, a most extraordinary instance of the restorative powers of life. ‘Nature, too, has her Cæsarean operation!’”—*Ed. Med. and Surg. Journ.* April, 1829, from the *Magazin für die Gesamnte Heilkunde*, 1828, xxviii. i. 157.

63. *Six successive Hip Presentations in the same Individual.*—An instance of



this is related in "*La Clinique*." The woman was well formed, of good constitution, and the pregnancy presented nothing extraordinary.

64. *Hip Presentations*.—In the Maternité in Paris, in twenty-thousand cases, three hundred and sixty were hip-presentations; of these, only thirty required the interference of art.—*La Clinique*.

#### MEDICAL JURISPRUDENCE.

65. *Case of Poisoning with Nux Vomica*. By Dr. BASEDOW, of Merseburgh.—A young lady, designing to take a laxative as a remedy for head-ache and tooth-ache, from which she was suffering, swallowed by mistake, at midday, a table-spoonful of powdered nux vomica. "She became alarmed on remarking its intense permanent taste; but did not call for assistance till she was almost instantaneously deprived of the power of walking and fell down, yet without losing recollection. Dr. Basedow saw her immediately after, and recognized the nature of the powder she had taken by what remained of it. She lay in bed with the countenance pale, and exhibiting alternately an expression of indifference and anxiety; she alternately wept and smiled; the eyes were wide open, and the pupils contracted. The respiration was irregular and short, the pulse also irregular, small, not hard or frequent, the skin cool. The forearms were constantly in a half bent position, and the hands and fingers affected with convulsive twitches; the legs, on the contrary, were motionless, rigid, and all the muscles hard and tetanically contracted. The patient had not the slightest pain or sickness, but her breathing became every moment more difficult, and she complained of impending suffocation. An emetic of five grains of tartrate of antimony which had been sent for was administered without delay, and in the course of ten minutes it operated with the assistance of draughts of tepid tea, and tickling of the throat. After repeated evacuations of the stomach, the matters of vomiting came away without any powder, by which time the symptoms were somewhat relieved, especially the dyspnoea. Small doses of a mixture of oil of turpentine and sulphuric ether were then administered every half hour. In the evening the tetanic spasm of the muscles of the legs, as well as the convulsive movements of the hands had ceased, and the respiration was free. For three days after the patient had a clouded look, complained of a sense of bruising over the whole body, and of weariness and rending in the limbs as if she had been fatigued by a long walk. The tooth-ache and head-ache disappeared with the commencement of the symptoms of poisoning."—*London Medical Gazette*, March, 1829.

66. *Case of Poisoning with Nux Vomica*. By Mr. BAYNHAM, of Birmingham.—A girl, aged twenty, swallowed half an ounce, (avoirdupois,) of powdered nux vomica, for the purpose of destroying herself. When seen by Mr. Baynham, an hour after it was taken, "she had violent spasmodic contractions of the voluntary muscles, but more especially of the limbs, with extreme pain in all the parts affected. The spasm at times continued for three or four minutes, and was then succeeded by some quick change of position, or a long succession of convulsive motions. The muscles of the back were so much affected by spasm as almost to render it a case of opisthotonos. Finding it impossible to retain her in a chair, she was placed upon a bed, and with the assistance of her neighbours, preserved in that situation from local injury. The action of the heart was slow and feeble; the pulse somewhat indistinct, and beating at an average in the first half hour, 50 in a minute. The surface of the body was cold, and uniformly wet with perspiration. The functions of the stomach and bowels not perceptibly disordered. She remained sensible throughout her illness. A strong solution of sulphate of zinc was administered with difficulty, since, with

every desire to second the object in view, she could not avoid biting through the cup by an uncontrollable action of the temporal and masseter muscles. A metallic vessel, which was then substituted, received the impression of her teeth. The emetic operated freely in a few minutes, but did not immediately relieve the symptoms. Abundant portions of gruel, and a large dose of castor oil, constituted the whole after-treatment. The pulse at the expiration of two hours averaged 70, and had become firm. The convulsions gradually subsided, and finally ceased in about four hours from the period of attack, after which she slept, and awoke early in the evening without any other feeling of illness than what resulted from exhaustion. The next day, although still feeble, she could walk from home."—*Ibid.*

67. *Case of Suicidal and Infanticidal Mania.*—"E. B. a young, and hitherto healthy woman, the mother of two children, in humble life, but not in indigence, applied at the Hitchin Dispensary, in consequence of the most miserable feelings of gloom and despondency, accompanied by a strong, and by her own account, an almost irresistible propensity, or temptation, as she termed it, to destroy her infant. This feeling first came upon her about a week before, when the child was a month old; and she was now sunk into an extreme state of dejection. She begged to be continually watched, lest she should yield to this strange propensity. The appetite is bad—bowels loose—stools dark and offensive—has occasionally discharged portions of tape worm from the bowels. Pulse natural; sleeps ill. This account is taken from the Dispensary report-book, October, 1824, and the treatment need not be mentioned, as the symptoms continued without alteration till March, 1825, when the patient took the small-pox. During the eruption, the mind was serene and happy, and she was free from the dreadful temptation by which she had been previously harassed; but, upon the subsidence of the small-pox, the disease returned with its former horrors.

"About the middle of April, the disease, without any apparent cause, began to decline, and she was, at the end of the month discharged from the Dispensary by her own request: her child was now six months old. She nursed it herself from its birth, and continued to do so till it was twelve months old. She remained free from any disorder until the spring of this year, 1828, when she had another child, and, about a month after the birth of it, she was assailed by this propensity to destroy it. The symptoms continued till the child was half a year old, and from that time have gradually declined. Occasionally for a few days, a sort of metastasis takes place; the propensity to destroy the infant entirely subsides, and the place of it is supplied by an equally strong disposition to suicide. It is worthy of remark, that during the most distressing periods of her disease, she is perfectly aware of the atrocity of the deed she is so powerfully impelled to, and prays fervently to be enabled to withstand so great a temptation. She has repeatedly told Dr. Hawkins, that the inclination to destroy her child has been so powerful, that she should certainly have yielded to it, if she had suffered herself to use a knife even at her meals;—for a knife is the instrument which she feels necessitated to employ in the perpetration of the act. Whilst this extraordinary state lasts, the bowels are uniformly relaxed, and the stools of a dark colour and offensive odour. She has suckled all her children for twelve months; she has had three children, but this dreadful state of mind has supervened on the birth of the two last only. It may be proper to observe that, when suffering from any bodily indisposition, the mind is serene and happy and free from any kind of morbid feeling. This poor woman is by no means deficient in affection for her infant even in the most trying period of her disease. This case appears of much importance in a medico-legal consideration. Is she of sound or unsound mind? And supposing in this case suicide were committed, and a verdict of insanity were returned, should not the same verdict be returned, supposing infanticide were the crime which the jury had to consider? The case altogether presents a very remarkable moral phenomenon."—*Med. Chir. Rev. April, 1829.*

68. *Injury from Sulphuric Acid.* By ROBERT CHRISTISON, M. D. &c.—By the English statute, which has recently been extended to Scotland, the wilfully, maliciously, and unlawfully throwing or applying sulphuric acid, or other corrosive substance calculated by external application to burn or injure the human frame, and by means thereof to murder, maim, or disfigure, is a capital crime. Dr. Christison relates, in the *Edinburgh Medical and Surgical Journal*, for April last, a very interesting trial under this statute.

Hugh Macmillan and his wife, Euphemia Lawson, were indicted for maiming, disfiguring, and disabling Archibald Campbell, by throwing sulphuric acid over him. It appeared, in evidence, that the Macmillans and Campbell lived in the same house, and were on bad terms; and that about midnight, October 17th, as Campbell, on his way up stairs to his lodgings, had approached Macmillan's door, the door opened, and the wife of Macmillan threw over Campbell a liquid which by its intense burning he at once suspected to be sulphuric acid. Campbell was conveyed, without delay, to the infirmary. "The skin on the left side of his face was partially removed, and the whole presented at first a white disorganized appearance. The eyelids of both eyes were much inflamed and swollen, and the left eyeball was also severely involved in the mischief, but the right eyeball was uninjured. The skin of the inside of the lips was also white and swollen, and on the back of the left hand, as well as between the fingers, there were white excoriated streaks. In the course of sixteen hours the white marks turned brown. The pain of the face and eyes, which was at first excruciating, became easier under the use of suitable applications. But as at the time of the visit, about twelve hours after the accident, the pain of the left eye, extending to the head, evidently threatened a severe ophthalmia, he was bled from the arm, and next day the operation was repeated. From these measures he derived great relief. The inflammation and disorganization of the eye, however, went on increasing, and soon ended in the bursting of the cornea and discharge of the aqueous humour and crystalline lens. Towards the close of the fifth day, namely, on the evening of the 22d, while apparently doing well, he had a shivering fit, and next morning complained of acute pain at the bend of the right arm, where he had been bled. Inflammation immediately sprung up around the orifice, general swelling of the arm came on, and progressively increased for the three following days. Severe febrile symptoms ensued, and afterwards also difficult breathing, with other signs of pulmonary inflammation. Under these complicated disorders he gradually sunk, and died on the morning of the 30th October."

The body was examined the day after death, by Dr. Hunter and the late Dr. Cullen, who made the following report:—

"The right arm was carefully examined and anatomized. We found the vein from which he had been bled very highly inflamed at the wounded part at the bend of the arm. From this point the inflammation had extended upwards to the great vein of the arm and shoulder, and downwards to the small veins of the forearm. These vessels were almost filled with purulent matter, and partly obliterated. The great veins at the upper part of the chest were natural.

"There was a small quantity of serum in the cavity of the membrane which inflames the heart, but that organ was itself sound.

"The membrane which covers the lungs and ribs, called the pleura, was inflamed, and covered at the back part with the usual product of inflammation. Sero-purulent fluid was found in both cavities of the pleura. Both lungs when cut into were found highly inflamed, and particularly in the upper and lower lobes." ["I may here add," says Mr. Christison, "in explanation, that both lungs were most extensively consolidated by serous effusion, red hepatization, and diffuse tubercles, intimately intermingled; and that the last morbid deposition was distributed in irregular masses, some of them of the size of a pigeon's egg, so as to occupy not less than a third part of the entire volume of the lungs."]

"The left eye had its anterior part entirely destroyed. Some of the hu-



mours [the aqueous humour and crystalline lens,] had escaped, and the whole organ was disorganized, and absolutely incapable of recovery.

'Water was found in considerable quantity on the surface, in the cavities, and at the base of the brain. That organ itself was natural. No other morbid appearance was any where observed.

'Upon the whole, we are of opinion that Archibald Campbell died of inflammation of the veins of the right arm, and of inflammation of the lungs, the former caused, according to the best of our judgment by the wound of the vein in bleeding.'

The wife was found guilty.

The indictment in this case contained a separate charge of murder, from which, however, the lord advocate departed at the commencement of the trial. We mention it here for the purpose of introducing some interesting and important observations on the subject, by Dr. Christison. The lord advocate abandoned the charge of murder, because, says Dr. C. "while it was quite certain that the evidence would establish another capital offence, his entering on the charge of murder would involve a nice legal question, as to the responsibility of the prisoner for an event which depended only indirectly on the injury inflicted by her, and directly on an insignificant surgical operation. The question, however, must be understood as having been waived, not decided. The decision of it of course will not lie with the medical witness. But it may be right for him to understand the nature of the evidence which in a similar case might be required from him with a view to its decision in the proper quarter. Now in charges of homicide, although it be proved that the injury inflicted by the prisoner occasioned death not directly, but indirectly, through the medium of a cause coming into action after the injury, the prisoner will nevertheless be held responsible, provided the injury was serious, and it shall appear that the intervention of the secondary cause though not a common event, lay in the natural course of things. Hence, if a person, after receiving a serious injury, should die of hospital gangrene caught by his repairing to an infirmary where it was prevalent, or of diffuse sub-cutaneous inflammation, arising in consequence of there being at the time an epidemic tendency to that affection, or even of tetanus, a disease of the supervention of which we can neither trace the causes, nor calculate the probability,—in all these circumstances would not the person who inflicted the injury be held responsible for the event? This appears to have been laid down in regard to tetanus, in the case of Alexander Mackenzie. The medical evidence showed that tetanus, though an effect of wounds, neither necessary, nor common, nor such as may be anticipated, is a consequence not sufficiently *accidental* to relieve the prisoner from responsibility, if the injury was severe and his purpose deadly.\* Does inflammation of a vein arising from phlebotomy,—that operation being rendered imperatively necessary by the effects of an injury,—belong to the description of accidents here enumerated? Most surgeons, I conceive, would reply, that it lies at least as much in the natural course of events as tetanus. Neither tetanus nor phlebitis is common after an injury, and neither would ever be held in view by a surgeon in forming his prognosis; but if there is any difference, the latter is on the whole the more common. Can phlebitis be considered a less natural event in the sequence of effects, merely from the circumstance that an operation is necessary for its development, provided the operation become absolutely imperative in consequence of the direct results of the injury? It must be admitted that these are all questions of great nicety, and difficult determination."

69. *Chemical Analysis of various Articles of Dress, in order to ascertain the Nature of Fluid poured upon them.* By Drs. CHRISTISON and TURNER.—It was thought proper in the preceding case, to determine by chemical analysis the nature of the corroding fluid, and we copy the account of the experiments,

\* Edin. Med. and Surg. Journal, xxviii, 414.

instituted for this purpose, as they exemplify the mode of procedure in parallel cases, and also supply the best process for the detection of sulphuric acid in the contents of the stomach of those who have been poisoned with it.

The articles analyzed were put into Drs. C. and T.'s hands a fortnight after the acid was thrown on them. "They consisted of a portion of the rim of a hat, affected here and there through and through; an uninjured part of the same hat, for comparative analysis; part of a black stock with its lining and stuffing, all much destroyed; part of the sleeve of a brown coat and its lining, likewise corroded and reddened; and an uninjured part of the same coat for a comparative experiment. The hat and stock, where affected, were moist and sour to the taste.

"The injured part of the hat was boiled in small fragments with distilled water, and a reddish-brown fluid procured by filtration. This fluid had an acid taste, reddened litmus strongly, and yielded with acetate of baryta a copious brownish precipitate, which was rendered white by nitric acid, and being then collected and dried at a red heat weighed 4.3 grains. A small portion of this powder being mixed with a little charcoal, it was heated for two minutes in a platinum spoon before the blow-pipe. The product, when diluted muriatic acid was poured on it in a tube, effervesced and emitted an odour of sulphuretted hydrogen, the evolution of which was farther proved by a piece of filtering paper, moistened with a solution of acetate of lead, becoming black when suspended within the tube.

"We then proceeded to make a comparative set of experiments with the uninjured portion of the hat. A reddish-brown fluid was procured, which faintly reddened litmus, and gave with acetate of baryta a scanty cloud, insoluble in nitric acid, but not forming any deposit when left some hours at repose.

"The injured portion of the stock was torn into shreds and treated in the same manner as the injured part of the hat, with precisely the same results. The sulphate of baryta procured from it weighed nine grains.

"The injured part of the coat sleeve and lining was also subjected to the same process, except that the barytic precipitate was collected by the process of subsidence and affusion without a filter, as it was scanty. The results of the experiments with it were precisely the same as those mentioned above, and they were all procured characteristically, although the sulphate of baryta formed did not exceed nine-tenths of a grain. A comparative analysis was made of an uninjured part of the sleeve. But the aqueous fluid only tinged litmus faintly red, and yielded with acetate of baryta a faint cloudiness without a deposit.

"These experiments made it certain that the fluid used was sulphuric acid."  
—*Ed. Med. and Surg. Journ. April, 1829.*

70. *Alleged attempt to effect abortion.*—About the middle of April last an account of a supposed attempt to procure abortion appeared in the London newspapers, and excited "a considerable sensation," both from the apparent atrocity of the circumstances, and from the full anticipation that the individuals accused, (of whose guilt no doubt was entertained,) would be executed. The *prima facie* evidence, as it appeared on the coroner's inquest, was said to be of the most positive nature, and so satisfactory to the jury, that, in the fullness of their gratitude, they passed a vote of thanks to the gentleman who had enabled them, by the clearness of his statements, to comprehend the intricacies of the case, and to bring in an unanimous and decided verdict.

The document which afforded so much satisfaction to the coroner's jury, was an account of the post mortem examination, and is signed by Launce Healey, surgeon. This document is published in the *London Medical Gazette*, for April 15th; and whether considered with regard to the orthography, the grammar, the description of the appearances, or the inferences deduced from them, is not a little remarkable.

The testimony of medical men in a court of justice often involves questions of life and reputation, and, as the study of medical jurisprudence has been too

much neglected by physicians in this country, the pointing out the errors of others may be salutary, by attracting attention to the subject, and, as a warning to those who are utterly incompetent, how they venture to express their crude opinions, and become accessory to the loss of the life or reputation of a fellow creature. With this view we copy the remarks of the editor of the London Medical Gazette, on the statement of Mr. Healey, omitting the original, as it would render this article too long, and the reader will learn enough of it from the following observations.

Passing by the style and manner of the composition of Mr. Healey, "we shall direct attention," says the editor of the Medical Gazette, "in the first place to that clause of the paper which refers to the condition of the mamma. The enlargement of this gland, the increased size of the lactiferous tubes, and the loaded state of the blood-vessels, one and all of them the natural results of pregnancy, are looked upon as proving, 'that strong doses of powerful medicines had been administered.' This passes belief: that any man should have delivered such an opinion under ordinary circumstances would only have been regarded as an example of marvellous folly, but that an inference, placing the lives of two individuals in jeopardy, should have been thus confidently deduced from such insufficient premises, constitutes a combination of ignorance and audacity of which the evidence of our senses alone could have convinced us.

"In the thorax the only circumstance worthy of note is, that the pericardium was 'rather thinner than usual,' a description in keeping with the anatomical skill displayed by the narrator throughout. Notwithstanding the preternatural thinness of this membrane, however, the heart and lungs were 'healthful.' The abdomen showed marks of general inflammation; the stomach and intestines were distended, and the former contained 'grumous' vegetable matter, smelling strongly of savine and rue. Now, when we consider the interval which had elapsed between the administration of these and the death of the patient, and that it appeared in evidence that Mr. Healey had himself administered various vegetable medicines, some of which were also possessed of powerful odour, it strikes us as a remarkable acuteness of the sense of smell to be able to distinguish both the savine and rue amid the variety of other substances more recently introduced, including hyoscyamus, senna, peppermint, &c.; and we would beg to ask whether Mr. Healey would have been able to speak confidently to the distinct and particular odour of the 'savine and rue,' had he not been made acquainted with the fact of these substances having been administered to the deceased, by one of the most extraordinary proceedings ever witnessed in any court; namely, putting the accused upon her oath, and taking her own evidence against herself!! (See report of the coroner's inquest.)

"The liver, spleen, and pancreas, were free from any thing remarkable: but we mistake, there was one remarkable circumstance,—the gall-bladder was about three parts filled with 'bile of a florid colour.' Such are the words in the original, '*bile of a FLORID colour!*'"

"Passing on to the urinary bladder, we find that it contained fluid which had a 'vegetable' smell, similar to that of the intestines; but here the odours, we presume, had become blended too much for separate discrimination, as they are not specified individually. On examining the meatus urinarius, Mr. Healey did not discover that any instrument had been passed to draw off the water. The only circumstance connected with which statement that requires comment, is the implied idea, that if a catheter *had* been so introduced, he could have ascertained the fact by examination after death.

"Of course, in such a case, particular attention was directed to the state of the genital organs. These were inflamed and excoriated, particularly the corpora '*myrtiformes*,' which we are informed are situated 'about half way up the vagina.' By far the most important point, however, and that on which the decision of the question mainly hinged, is the assertion that there were marks of various instruments to be seen about the os uteri. It is said there were 'two distinct dents,' as by a blunt, and 'five distinct punctures,' as by a sharp in-



strument; while, it is added, that, on pressing the latter, 'matter' exuded. Guided by these appearances, and the inferences he conceived to be deducible from them, Mr. Healey summed up by declaring his belief that the death of the deceased was caused, 'by administering savine, rue, and hyoscyamus,' and 'by the frequent attempts to perform an operation locally.'

"This brings us to the history of the trial, which may be given in very few words, the details being too voluminous, and not of sufficient interest for publication.

"Some doubts as to the absolute accuracy of Mr. Healey's opinions seem first to have suggested themselves to Mr. Brain, the surgeon to St. James's parish, and he thinking that a question, which affected the lives of two of his fellow-creatures ought not to be hastily decided, took means to make himself acquainted with the *natural* state of the parts at different periods of utero-gestation, and was thus led still farther to question the correctness of the doctrines laid down before the coroner. Dr. Robert Lee was also consulted, and he, on examining the parts distinctly, pointed out that the alleged 'punctures' were nothing more than the openings of the excretory ducts of the glands, presenting such, and only such appearances as are usually met with at this period of gestation. But what amounted to absolute demonstration of the correctness of this opinion, was the fact, that into the supposed 'punctures' several smaller mouths opened, being the apertures of various ducts discharging themselves at one common point: while the 'matter' which oozed out on pressure was only the gelatino-mucous secretion natural to the parts.

"On the trial, as may be supposed, Mr. Healey totally failed in substantiating the assertions he had made before the coroner; and so completely 'broke down' that it became obvious the cause was at an end, even if no other evidence had been in store. Neither Dr. Paris nor Mr. Jewell, who had been called for the prosecution, supported the original statements of Mr. Healey. As to the 'punctures,' the former thought it impossible to give a decided opinion upon the subject in the then state of the parts, while the latter was doubtful whether the appearances were the result of violence or not. The charge, therefore, of punctures having been made in the attempt to introduce a sharp instrument must have fallen to the ground, even without the positive evidence of Dr. Lee and Mr. Brain, which appeared to us, and what is of more importance, was deemed by the court, perfectly satisfactory against it.

"The charge of having administered certain drugs, with a view to induce abortion, might still have attached to the female prisoner had not the fact of their administration been got at by the extraordinary proceeding above-mentioned—that of making her criminate herself.

"With the collateral evidence we meddle not, nor do we offer an opinion as to the conduct of the parties accused; we limit ourselves to the medical part of the question.

"The coroner's jury were guided by the professional testimony adduced when they brought in their verdict; and when we come to examine the grounds of this testimony, we find them, not only insufficient to support the weighty inferences founded upon them, but such as actually appear to have had no existence except in the imagination of the witness. The natural openings of ducts are declared to be punctures from a sharp instrument; the fullness of the mamma, attendant on impregnation, is held to be the consequence of powerful medicines; and though least in importance, assuredly not last in absurdity, the gall-bladder is asserted to have been filled with 'florid bile.' And yet for this report, the coroner's jury presented the witness with a vote of thanks! A most unfortunate vote; an enduring evidence of their own incapacity, and fixing attention upon a document which, for its presumption and folly, stands without a parallel in the records of medical jurisprudence.

"The recent case of Mr. Neale, and the present, point clearly to the insufficiency of the state of the law as regards the coroner's inquest. No man can conduct the necessary investigation who does not understand the legitimate in-

ferences to be drawn from the appearances presented by the dead body: any man possessing such information would have at once detected the fallacy of the evidence in both the instances alluded to. But these cases do more—they clearly point out the necessity of examining competent witnesses.

"The former instance showed the inadequacy of the most perfect acquaintance with one branch of medical science—anatomy, to enable the surgeon to draw correct inferences from what he saw; the present shows still more forcibly the danger of a jury trusting to the evidence of one bold enough to give a decided opinion upon a subject of which the result has proved that he was wholly incompetent to judge.

"In common with other men, we view with horror the offence of which the parties were accused; and assuredly our voice

"Was ne'er employed  
To clear the guilty, or to varnish crime."

But, as in two recent instances, attempts have been made on the evidence of medical men to establish charges of violence where the appearances they have themselves described warranted no such inferences, we have felt it to be a public duty to animadvert upon their conduct. In the latter case, had the evidence leant to the side of mercy—had the consciousness of ignorance led to diffidence in drawing conclusions—we should have thrown a veil over its absurdity; but when ignorance is united to rashness, and leads to positive testimony, involving the lives of others, it forms a combination too dangerous to be left to its consequences unchecked by the salutary caution which public exposure never fails to inspire."

71. *Two Cases in which the External Application of Corrosive Sublimate proved fatal.* By JOHN WARD, Esq.—Case I. A man, aged twenty-four, rubbed over every part of his body *one ounce* of corrosive sublimate, mixed with six ounces of hogs lard, and then took a large dose of sulphur and treacle, for the cure of an eruption resembling itch. At ten o'clock, March 13, 1828, about one hour after using this ointment he was seized with most excruciating pain all over the body, more especially about the abdomen, on which part and the thighs he had rubbed the largest quantity; and he felt as if he were "roasting alive." Unable to lie in bed, he arose and went out to a hay-loft, taking with him a gallon of water, his thirst being insatiable. In the morning Mr. Ward was sent for, and found the patient with the whole of the parts over which the ointment had been rubbed, in a state of complete vesication; the penis and testes swollen to an enormous size; agonizing pain in the stomach and bowels, distressing nausea, great thirst; tongue coated with white fur; pulse 110, and full. He was ordered barley water, &c. for drink, twenty leeches to epigastrium, and infusion of senna and sulph. magnes.

*March 15th.*—Great restlessness, severe tormina, and frequent bloody stools, passes urine freely, pytalism commencing.

*16th.*—Complete state of salivation, severe head-ache, "torments in his belly." Has had no rest, blood oozing from his mouth and nose; frequent discharges of blood per anum; pulse 90, and feeble.

*19th.*—Has thrown up a large quantity of blood from the stomach; stools and urine passed involuntarily; severe hiccough; does not speak unless roused, but, when asked, says that "all his pains have left him." No delirium from the commencement. He lingered till the 24th, when he died; examination of his body not permitted.

Case II. A brother of the preceding, aged nineteen, also rubbed in an ounce of corrosive sublimate in hogs lard; his history is the same except that after getting up, and accompanying his brother into the farm yard, he lay down in a stream of water, where he remained all night, drinking at intervals considerable quantities. In the morning he was unable to move.

*March 14th.*—Symptoms much the same as his brother's, but more aggravated; pulse 130, full—unable to pass urine. Ordered v. s.  $\zeta$ xviij.; ol. ricini.  $\zeta$ i.

In the evening, no urine having been passed for thirty-six hours, a catheter was introduced into the bladder, but no water was drawn off. Ordered fifteen leeches to the epigastrium.

15th.—Worse than his brother; bowels open; constantly vomiting; headache; has voided no urine; other symptoms same as his brother.

16th.—He appears much more comfortable to-day. Has slept three or four hours. The vomiting has nearly ceased, and he has been able to retain a basinful of weak broth. Pulse 104, and feeble. Tongue dry and black. Ptyalism not so great as his brother's. Complains of excessive pain in his bowels. Has voided no urine, neither does any follow the introduction of the catheter.

17th.—Great anxiety of countenance; he says that he is perfectly free from pain; makes no water; has frequently bloody stools; drinks plentifully of weak broths, arrow root, &c. Has not vomited since yesterday afternoon. Pulse 96, and weak; tongue black and much swollen; has fainted two or three times, and but very slowly recovers from this state. Is very irritable, and says he is dying. The sores about the groin are sloughing extensively, and mortification is evidently going on internally.

18th.—He died about two o'clock, P. M.

*Post Mortem Examination.*—Appearances in the abdomen:—The stomach was found highly inflamed, with small spots of ulceration in several places. The small intestines were greatly inflamed throughout their whole course, and the lower portion of the colon and rectum in a state of complete mortification. The liver was large and unusually loaded with blood. The bladder was healthy in appearance, but contracted to a very small size, and did not contain the least drop of urine. There was a great quantity of bloody serum in the cavity of the abdomen. This examination took place eight hours after death, and no other parts were examined.

Thirty large worms were found alive in the stomach and large intestines. Mr. Brodie and some others are of opinion, that bleeding, in cases of poisoning, seems generally to promote the absorption of the poison. Mr. Ward thinks that this opinion is in some measure borne out in this case.—*Lond. Med. Gaz.* April, 1829.

## CHEMISTRY.

72. *Supposed Artificial Diamonds.*—M. Thenard gave an account of the experiments made by himself, MM. Dumas and Cagniard de la Tour, to verify the trials by which the latter thought he had obtained the power of crystallizing carbon, and forming diamond. An accurate analysis of these crystals, which had no colour, proved, however, that they were only silicates, and not artificial diamond.—*Annales de Chimie*, 1829.

73. *Preparation of Hydriodic Acid.*—Dissolve sixty grains of iodine in a sufficient quantity of alcohol; diffuse one ounce of finely divided starch through four ounces of water, and add this, drop by drop, to the former solution; allow the iodine of starch to settle, and pour off the clear liquid. Pass a current of sulphuretted hydrogen through the deposit; the colour will at first change to orange yellow, from the formation of an iodide of sulphur, then it will become yellow, and ultimately white. The whole is to be filtered, the insoluble part washed with small quantities of water, and the solution slightly heated to dissipate the sulphuretted hydrogen. The solution may be obtained of specific gravity 1.5, and is pure hydriodic acid.—*Brand's Archives*.

74. *Preparation of Iodine.* By M. SOUBERAN.—The following is the process recommended by M. Souberan, by which he has obtained as much as the eightieth part of iodine from mother liquors, that would yield none by the or-



inary process. The mother liquors from the soda works, are to be diluted with four or five times their weight of water, and solution of sulphate of copper added, until precipitation ceases. The deposit will consist of iodide of copper and sulphate of lime, and is to be separated. Large iron filings or turnings are then to be put into the liquid and agitated, until all smell of iodine has disappeared, by which process, the remaining portion of iodine will separate as an iodide of copper, mixed with metallic copper and the iron turnings, but easily separated by washing over. These two precipitates are then to be acted upon separately, in one of the following ways:—1, the iodide is to be mixed with two or three times its weight of peroxide of manganese, and a sufficient quantity of concentrated sulphuric acid, and then distilled, when all the iodine will rise with some aqueous vapour; or 2, the mixture of iodide and oxide of manganese is to be heated in a retort to a high temperature, when pure iodine will come over, the residue is pulverulent, and can easily be extracted without breaking the vessel.—*Annales des Mines, Vol. III.*

75. *Phosphoric Acid in Potash.*—"According to M. KOBELL, phosphoric acid is found in nearly all potash, in crude tartar, and in the ashes of most plants. It may usually be found in potash by saturating the alkali with muriatic acid, evaporating and crystallizing, redissolving the crystals, adding ammonia to the solution, and then muriate of lime. A precipitate forms more or less slowly, which has the characters of phosphate of lime before the blow-pipe, and moistened by sulphuric acid, communicates a green colour to the flame of a spirit lamp."—*Kastner's Archives.*

76. *Nitrate of Silver as a test for Animal Matter.*—"Dr. DAVY states that nitrate of silver, dissolved in pure water, is not altered by the sun's rays. If the minutest quantity of vegetable or animal matter is present, the solution is discoloured; and with common distilled water, the discoloration is strong. To prove that the causes of the change of colour is the one assigned, it is sufficient to allow the coloured matter to subside, decant the colourless solution, and expose it again to sunshine. However powerful the sun's rays are, no further effect is produced; but, add more common distilled water, and the phenomenon will instantly reappear. He believes nitrate of silver thus used, is one of the best tests of the presence in water of very minute portions of vegetable matter: of course any chloride of silver that may be formed in consequence of the presence of any muriates should be allowed to subside in the dark, and the subsidence should be complete before the fluid is decanted and exposed to light."—*Jameson's Journal.*

#### MISCELLANEOUS.

77. *Yellow Fever.*—This disease, for some time past, has been the subject of most animated discussion in France. The dispute of its contagious or non-contagious character, now happily settled in this country, is maintained with all the vigour it formerly excited amongst our predecessors. Every circle is occupied with it. It is talked of in the saloons, canvassed by sage politicians as an affair of state, and battled over by learned professors with a vehemence not only destructive of professional gravity, but, it is to be feared, prostrating the love of truth, in the feelings of a personal contest; while the press has been busily occupied in the affair, sending forth numerous works, from heavy tomes to fugitive essays. The principal field of controversy, has been the Royal Academy of Medicine. No question has probably elicited in that truly eminent and illustrious body of medical philosophers, a higher degree of interest, or a more prolonged and lively debate.

The author of this discussion is Dr. Chervin, held in honourable and estima-

ble recollection, by those of his professional brethren of this country, who became acquainted with him during his tour of observation and investigation through the Atlantic cities of the United States, some years past.

In France, as in this country, when Yellow Fever first attracted attention in 1793, the popular belief and medical opinion, were almost unanimous in regarding the disease as eminently contagious. Dr. Deveze, who possesses the merit of having first opposed this error in the United States, it is true, had in France, equally resisted its propagation. In this country, the opportunities of observing and examining the nature of the disease, presented by its frequent recurrence, produced an early conviction of the correctness of his views. The truth once developed, soon enlisted numerous advocates, and nearly all who subsequently entered the profession, coming fresh to the examination of the question, with unbiassed minds and free from preconceived theories, decided from the weight of accumulated testimony and more enlightened observation, against the contagionists.

No great truth has ever been established by individual conversions. Those who are educated in a belief, or early adopt an opinion, generally die in the faith. It is by generations that truth and correct knowledge progress. A novelty advanced reservedly in one generation, and met with violent opposition, with denunciations and persecutions, is an acknowledged and established principle in the next.

Such precisely is the history of the doctrine of the non-contagion of Yellow Fever. In 1793, the profession were almost unanimous in the belief of its contagious character, and no little courage was required to brave the storm an opposite opinion would have awakened. In this generation, an equal unanimity prevails in the profession as to the non-contagious nature of the disease; and he who advances the opposite doctrine seriously, is deemed no more worthy of notice, much less a refutation, than would be an advocate, at this time, of the Ptolemaic system.

In France, where the disease is unknown, and, as respects the great portion of the country, from the absence of the essential requisites for its production, it cannot prevail; the force of authority and established opinion, unopposed by absolute observation, continued to predominate, notwithstanding the publications of M. Deveze. The question which had thus been put in controversy in France, Dr. Chervin undertook to investigate thoroughly. It had then excited new attention and interest by the great political movement of which it was a cover, in being employed to mask the concentration of a large force on the frontiers of Spain, intended for its invasion and the overthrow of its consitutional government, under the pretext of a "cordon sanitaire," to prevent the introduction of the contagion and the disease of Yellow Fever into France.

The mode of investigation adopted by Dr. Chervin, was the only one adapted to settle this controverted point irrefragibly, and is an evidence of the zeal and enthusiasm animating him in the search of truth. Dr. C. did not content himself with framing speculations in his closet, founded on the statements furnished by others: he determined to see, to hear, to examine for himself; nothing was received implicitly, whatever its authority; every thing was sifted to the bottom, and all that was false, that was mere popular credulity and idle rumour, was separated from the true, from sound observation and positive fact. To this research Dr. Chervin devoted five or six years, in the course of which he visited the principal of the West India Islands; he traversed the Atlantic border of this country, from New Orleans to Maine; he repaired to Guiana; on his return to Europe, he made Spain the seat of his enterprise and perquisition in two different tours, and was lately at Gibraltar. Abundant opportunities were enjoyed by him of witnessing the disease in its epidemic ravagés, and in its sporadic and endemic occurrence. He studied the disease in its victims while living, and he interrogated their remains when dead, to determine its pathological nature. He examined, and inspected himself, all the localities where it had commenced its course, or had prevailed, in order to determine its origin,

and its mode of production; he scrutinized all the tales and rumours invented by an excited imagination, or founded on occurrences distorted by alarm, credulity, and obstinate and blinded prejudices.

In addition to his own researches and scrutiny, he invoked the aid of the members of the profession, in each place the seat of his examination; he solicited and obtained from them their opinions as to the contagious or non-contagious character of the disease, accompanied with the facts on which these opinions were formed. The documents thus procured were verified by the official seals and signatures of the local authorities, and the French consul, where one was resident. Dr. Chervin, in this manner has not only presented the results of his own researches, but he has polled the medical profession, wherever yellow fever has prevailed, for their sentiments on this point. In the West Indies, and in this country, where the profession are untrammelled in their opinions by government, a degree of unanimity was found to prevail, unexampled on any question of science, arts, religion or morals, the subject of debate. So far as the opinion of those the most conversant with the disease, and the best entitled to decide the question, from possessing the best opportunities of determining the exactitude of facts, may be considered as settling this question, it is put to rest; and the vulgar opinion will in the end, as it always does, though with slowness, be modelled after that of the intelligent and philosophic.

The visit of Dr. Chervin to this city is fresh in our recollections; the most favourable impressions were made by his courteous deportment, and he has left behind him "golden opinions." The zeal, fidelity, impartiality, diligence, and candour, with which he executed, while with us, the duties of his voluntary mission, are the sure guarantees of his ability for its performance, and of the entire faith that may be reposed in the results of his labours.

The work of Dr. Chervin on the Yellow Fever, which must necessarily be very voluminous, has not yet issued from the press, but when it does appear, we have no hesitation in believing it will prove decisive as to the great question which has so long agitated the medical public.

In the meantime Dr. Chervin submitted to the Academy of Sciences a memoir, containing a summary of his numerous researches on Yellow Fever, with the documents he had collected, which was offered in competition for the prize of medicine, founded by M. de Monthyon. On the favourable report of the committee appointed to examine the essays, the Academy decreed to Dr. Chervin a prize of ten thousand francs. It was not intended to express by this vote a positive opinion on the subject of the contagious or non-contagious nature of the disease: it was offered as a testimony of the approbation of that body to the zealous and laborious investigation of Dr. Chervin, indefatigably sustained in so many regions, and for so many years. That this reward was well deserved none but the prejudiced would deny; yet, those who were the advocates of the contagiousness of Yellow Fever, endeavoured by every possible means to prevent the accordance by the Academy of this approbatory testimony. Their efforts, to the honour of that illustrious body failed, and have only served to render the triumph of Dr. Chervin more signal and gratifying.

In the number of the *Bulletin des Sciences Médicales*, for October, 1828, a list of the various publications this controversy has called forth, and a very clear and condensed compendium of the arguments and statements of both parties, has been presented by M. de Fermon, drawn up with great ability. If the question were not so completely at rest on this side the Atlantic as no longer to awaken interest, we should be tempted to translate this article for the benefit of our readers, as exhibiting in a brief space and lucid manner the principal points of the controversy.

There is, however, a passage we cannot pass by, as it contains the true hygienic proceedings for arresting the progress of Yellow Fever, on its appearance in our cities, and preventing it from assuming the character of an epidemic. It is a thousand times worth all the quarantine regulations maintained at so heavy an expense, and to the injury of our commerce. We attach the more



importance to this recommendation, as we are thoroughly persuaded, from the observations we have been able to make on this subject, that the poison productive of Yellow Fever is seldom extensively generated, or widely diffused. Its source is often extremely limited, and the disease is contracted by an approach to its seat of origin, and not by the conveyance of the infection to a distance. When the point of infection happens to be in a populous district, or a situation of great resort for commercial, or other objects, many hundreds are exposed in the course of a few days to the miasmatic poison, are attacked in rapid succession in different quarters of a city, and the appearance of an extended epidemic is, thus, given to a disease of very limited range.

"When an infectious disease exists, the place that is its focus should be evacuated, and the infected spot should be surrounded, at a certain distance, by a cordon, which would, then, be really protective of health, (*sanitaire*,) whose object would be to prevent individuals from entering the unhealthy situation, and not to enclose in it those who have contracted there the disease with which they are attacked, aggravating their position by forcibly retaining them in the midst of miasms, and exposing them to all the influence of deleterious causes, until finally the sick succumb, or, by the force of their constitutions, triumph over these fatal precautions."

As connected with this subject, the following extract of a letter from an American gentleman in Gibraltar to a friend in this city, giving an account of the late epidemic in the former place, may be considered as interesting. The author is a gentleman of great intelligence and respectability, and, though not a physician, every confidence may be placed in the accuracy of his facts, as from the station he holds, he has peculiar facilities for obtaining information; and having no theory to support, and probably no very strong preconceived notions on the subject of Yellow Fever; there is no reason to believe that he has seen things as he wished them to be, and not as they were.

"The Yellow Fever has just left us; for three weeks preceding Christmas day it declined daily, but still there were cases reported, and we began to fear it would never cease: on that night the wind set in from north west, the thermometer fell from  $64^{\circ}$  to  $50^{\circ}$ , and cut the disease short off—not another case. Dr. Pym, whose name you know, arrived from England, and took the medical command; he is now employed in routing out the filth and dirt from all the rookeries in the town; cleansing, purifying, &c. &c.: he has shut the gates hermetically against the admission of all us fugitives, and does not, we understand, mean to admit us to our residences until twenty days after the last case—a most prudent measure in all respects.

"The weather is cold, and in all respects seasonable.

"I shall hereafter collect all that may have been said, thought, or written on the subject of this fever, and send it to you. The old dispute of *contagion*, *non-contagion*, *import*, and *generation*, is carried on here with the usual asperity: there is no doubt with myself that it was generated in the place, and is what the Spaniards call '*uno higo dela placa*.' The manner in which it has been treated by the English practitioners, also is strongly reprobated by the Spanish and other foreign physicians; the English invariably attacked the disease with doses of three or five grains of calomel every two hours; the Spaniards commenced by giving half, (or more,) of a tumbler of olive oil, followed in half an hour by rather a smaller quantity of the same rendered emetic by quantities of warm water; as soon as it commenced working downwards a very free use of injections was resorted to, and the stomach completely emptied; then followed large doses of castor oil, sometimes a dose of compound jalap; leeches invariably applied to the head and lower part of the belly; and in some cases the pains in the spine relieved by leeches on that part *low down*. It appears that whenever the disease was attacked in its first stages by these remedies the patient invariably recovered; but *good nursing* was considered absolutely necessary; and in some instances from eight to ten days elapsed before the patient was allowed to take any thing solid; chicken soup, barley water, and beef tea, being their

only sustenance; many were lost by indulging too early; relapses in most cases proved fatal. Thousands of the poor were treated according to this system without any medical advice, and recovered; and what is remarkable that not one of these had the fatal symptom of retention of urine, or an entire want of secretion.

"Those who were treated with calomel died in the proportion of one to five, so that amongst us *quacks* there is the greatest possible prejudice against its use. The Spaniards say the disease is an *inflammation of the intestines*, that they must be emptied and cooled with diluents, and that calomel adds fire to fuel; they say that the disease is more rapid than the effects of calomel, and that if ever you sustain life until the patient is salivated, it does no good, as it is quite probable they would have done as well without it. It is also remarkable that those patients who were treated with calomel, convalesced very slowly—particularly the military—whilst those who were under the oil system got well much sooner; it was most fatal to persons between the ages of twenty-five to forty-five; fewer females died than males; children got over it very easily, and pregnant women generally escaped the infection. Many families shut themselves up in their houses, and held no communication; two or three houses escaped, full of inhabitants; other houses, with but three or four inmates, though well ventilated, and not joined by other buildings, had the infection. It may be well to remark to you, that there has not been a solitary instance of any person having taken the fever, who had it in former years; so great is the confidence of people upon this point, that several of my acquaintances who were absent in England and elsewhere, returned during its greatest malignity, entered the town, and pursued their usual avocations. I knew of several young men who ran away when it was declared, uncertain whether they had the disease in 1804, 1813, and 1814; these wrote to their friends abroad to ascertain whether they had it in infancy, and upon being assured they had, all returned to the town. I have five clerks, all of whom had, what is technically called 'passed the fever,' in former years, who all remained, and were employed nursing the sick; not one of either of those classes had an attack. On this isthmus, under canvass, and in huts or houses, there are at this moment about ten thousand persons; the distance from where I live to the entrance of the town is about half a mile; the advanced line of the military encampment is not one-fourth of a mile from the gate; the communication was uninterrupted during the whole period. Detachments of the regiments were daily detailed for town or garrison duty; there is scarcely a soldier who went into the gates who did not take the fever; in some instances, the disease did not manifest itself for ten or twelve days, others in twenty-four hours, but most generally in four or five days; yet, notwithstanding all this intercourse, there is not an instance of any person falling sick who could not be traced to an absolute visit to the town, a proof, (I say,) that it is not a contagious disease, and only infectious in infected air. If, therefore, it could not be brought half a mile, how is it possible to carry and propagate it across the Atlantic?"

78. *Small-Pox*.—Dr. GEORGE GREGORY presents us, in a very interesting paper in the *London Medical Gazette*, for February, 1829, with the experience of the Small-pox Hospital, during the year 1828.

One hundred and ninety-three patients were admitted with small-pox, or some of its modifications, during the year. Of these, seventy-one had undergone regular vaccination, leaving a cognizable and for the most part good cicatrix. Of the remaining one hundred and twenty-two who were unprotected, fifteen had been "cut for the cow-pox ineffectually," and one hundred and seven took the disorder without having submitted to any kind of preparatory process. None were admitted subsequent to variolous inoculation. The total number of deaths was sixty-six, rather more than thirty-three per cent. Of the one hundred and twenty-two unprotected cases, sixty-three died and fifty-nine recovered, being a mortality of above fifty-one per cent. Of the seventy-one who had undergone

vaccination, three only died, and sixty-eight recovered, being a mortality of only a little more than four per cent.

The few deaths that have occurred among those who suffered under small-pox, after undergoing vaccination, may lead some to suppose that the fatality of small-pox has diminished. Such, however, is not the fact. In 1794, the rate of mortality in the hospital was thirty-five per cent.; in 1795, thirty-one per cent.—average of the two years, thirty-one. In 1828, as we have already stated, with seventy-one admissions subsequent to vaccination, the rate of mortality was no less than thirty-three per cent. and if we consider only those who were unprotected by vaccination, fifty-one per cent.

But it is not only lessening the mortality that vaccination has shown its beneficial influence, it has also shortened the amount of suffering. The duration of each patient in the hospital shows pretty correctly the severity of the complaint, for, with few exceptions, they were all admitted on the second, or, at the farthest, on the third day of the eruption; nor were they discharged until perfectly restored to health. Thirty-seven patients having small-pox after vaccination, were discharged cured, having been in the hospital less than twelve days. Eleven of these were less than eight days in hospital. Forty-seven out of sixty-eight were discharged cured within a fortnight from admission. Eight only remained in the hospital upwards of three weeks. On comparing this with the experience of the hospital prior to the days of vaccination, it appears, that in 1794, out of two hundred and thirteen patients three only were discharged within a fortnight from the date of admission, viz. one on the fourteenth, and two on the thirteenth day; and in 1795, out of one hundred and eighty patients two only were so discharged, viz. one on the tenth and one on the twelfth day after admission. By far the larger proportion of the discharged cases remained upwards of three weeks and many several months.

Dr. Gregory endeavours to explain the fact of the average rate of mortality by small-pox not having diminished since the discovery of vaccination, by supposing that the *modified* cases have taken the place of the *natural distinct*, and he says, "it will be found that the latter, formerly so common, is now become a very rare form of the disorder, insomuch that, for the last two months, not one case bearing that character has been admitted into hospital."

"We may generalise," he adds, "one step further, and lay it down as a great general law, that there are certain constitutions which are naturally *patient* under the influence of the variolous poison. Prior to the discovery of vaccination, these must of course have been far more numerous than at present. In consequence of the disuse of inoculation, and the fewer foci of the poison now to be met with, the disease fastens itself at present chiefly upon those whose constitutions are predisposed by weakness, or some less cognizable circumstance—whose systems are exceedingly irritable under the operation of the poison, and who therefore suffer severely from it. Hence the greater number of confluent and semi-confluent cases in the practice of the present day among the unprotected part of the community; while the proportion of mild and recoverable cases is kept up by vaccination."

"If I have reasoned rightly on the phenomena before me, the following may be looked upon as a correct statement of the influence of vaccination upon the human body. Those persons whose constitutions are naturally patient under the influence of the variolous poison, and who, prior to the discovery of vaccination, would have had the mild or distinct kind of small-pox, are by vaccination rendered perfectly secure from the attacks of small-pox. Those again whose constitutions are naturally *irritable* under the variolous poison, and who would formerly have suffered severely from it, even by inoculation, are now, by vaccination, rendered in a great degree secure from its mortal effects. The few who do fall victims to small pox after vaccination, are those whose constitutions are so peculiarly susceptible and irritable as to bid defiance to any kind of medical treatment, whether prior to, or during the attack."



79. *Report of the Council of Health of the City of Paris, for the year 1827.*—The bill of mortality formed with much care in the offices of the third division, a classification of the deaths being made according to their several causes, presents an exact view of the mortality in each of the arrondissements and quarters in the city at large, as well as various hospitals and infirmaries situated within its limits. To render the calculations relative to the influence of local causes upon the mortality more exact, an attempt has been made, for the first time, to separate from the table all the deaths of individuals, which, arriving sick at Paris, or only having inhabited it for a few days, had not been subjected to the influence of these causes. For the first time, also, a view is exhibited of the deaths from phthisis pulmonalis in each of the wards or quarters. As pulmonary catarrh, notwithstanding its attendance upon a much more advanced age, appears, nevertheless, in the progress of its symptoms, to confound itself with phthisis, we think it will likewise be useful to present a view of it as it occurs in each quarter, in order to ascertain if possible, whether its existence, like what we suppose to be the case in phthisis pulmonalis, is not owing to local causes, among which place of dwelling or locality, (*l'habitation*,) appears to be the principal.

We refrain from drawing any inductions from this first calculation of the deaths occasioned by pulmonary consumption, since, notwithstanding the remarkable differences it presents in one quarter from another in the same arrondissement, and in the twelve, we think that this investigation should be continued for a series of years, previous to deciding upon the probable causes why this disease, so common in cities and so rare in the country, commits its ravages more in one quarter than another.

In classifying diseases according to the order in which they have been most frequently fatal, we still find phthisis pulmonalis in the first rank. The deaths by this disease are 1086 males and 1444 females. Most of these victims have perished, the females between the ages of fifteen and forty-five years, the males between the years of twenty and thirty-five. Pulmonary catarrh, which may be regarded in some measure as the phthisis of old age, has caused the death of 855 men and 1027 women; its ravages are most frequent from the fortieth to the ninetieth year. Gastritis has swept away 838 males and 993 females, most of whom perished in the three first months of life, or during the first and second years. The same observation may apply to enteritis, which carried off 1018 males and 1033 females. Peritonitis has proved fatal to 129 men and 421 women; it has been particularly destructive from the age of fifteen years and upwards among the male sex, and between the years of fifteen and forty-five among females. 191 males and 197 females died from inflammation of the brain, the greatest number in the three first months of life and between the years of fifteen and seventy. Inflammation of the lungs has destroyed 869 males with an equal number of females, of the age of fifteen and upwards, but more particularly in the three first months of infancy. Of apoplexy there died 512 men and 403 women, between the years of thirty-five and eighty. Of cancer and scirrhus 107 men and 417 women fell victims, the males from the age of forty, and the females from the age of twenty upwards. There died of aneurism of the heart 220 males and 393 females, from the age of twenty upwards. Fevers considered in the order of their mortality, present themselves as follows:—Cerebral fever has swept away 293 individuals of the male and 252 of the female sex, showing its greatest mortality in the period of infancy and youth; there have died of the fever called putrid 87 men and 93 women; of that styled *malignant* 84 males and 74 females of the age of ten years and upwards; and of the fever denominated *bilious*, 60 men and 38 women.

Among children, convulsions have proved fatal to 756 boys and 736 girls, the greatest number in the three first months of life, and from the first to the second year; dentition, 108 boys and 114 girls; whooping cough, 54 boys and 64 girls; croup, 85 boys and 86 girls; small-pox, 97 boys and 63 girls; measles, 47 boys and 39 girls. Of still-born and premature births, there were 799 males and

655 females, whilst the amount of such as died from weakness, from the period of birth to the third month was 339 boys and 332 girls.

This concise view of the chief causes of mortality during the past year, (1827,) shows us in the first rank phthisis, pulmonary catarrh, gastritis and enteritis. These diseases have in fact produced alone more than two-fifths of the deaths. With regard to phthisis and pulmonary catarrh, we repeat that most of their victims have been females, in so remarkable a proportion as to exceed a fourth more. What is the cause of this difference? May it not be attributed to the more sedentary life of women, which renders them more liable to the influence of local causes, and more particularly to that which cohabitation exercises upon the economy.

The frequent occurrence of peritonitis among women, is sufficiently explained by the nature of the functions associated with the uterine system, and the influence which these exert in the production of that disease. Being subject to a sanguineous evacuation easily deranged, to a sedentary life, and a higher degree of moral susceptibility, and especially to more frequent causes of sorrow, may afford some explanation why organic diseases of the heart are more common among women than men; but from whence arises their greater liability to cancerous affections? Certainly, if these disorders depend upon a virus, there can be no reason why they should be less common among men. This difference, it appears to us, proceeds in some degree from the neglect arising out of a false modesty, by which means the treatment of the disease is only attempted during the chronic stages; for inflammations of the maternal organs, when neglected, produce at length that degeneration of the tissues which characterizes scirrhus and cancer.

The number of children which have died of convulsions is still very great, although not so many victims have fallen as during the year 1826. We cannot too often repeat, that convulsions are only the symptoms of a cerebral irritation, almost always consecutive to irritations of the digestive organs, so frequent in the first months, and during the period of first dentition. It is especially in seeking to prevent and combat the affection of the digestive passages, which will lead to a diminution of the frequency of convulsions; and in this double light, we cannot too strongly recommend the frequent use of bathing, emollient cataplasms, mucilaginous drinks, &c.—*Recueil Industrie, etc. Nov. 1828.*

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80. *On Feigned Diseases of the Heart.* By Dr. QUARRIER.—A man, named Chapman, became notorious in the Royal Marine Artillery for possessing powders capable of producing symptoms so closely resembling those of diseased heart, as to deceive the medical attendants, and lead to the men procuring exemption from duty. These powders, it appears, consisted chiefly of the *helleborus albus*; and the drug was actually administered in the immense doses of one drachm or more, when it was intended to produce a very decided effect.—*Provincial Medical Gazette.*

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81. *Phrenology.*—Dr. ELLIOTSON related, at a meeting of the London Phrenological Society, the following case of a young lady under his care, who is diseased mentally in reference to cleanliness. This patient “suffers the greatest anxiety lest any dirt should touch her, or any dust get upon her. If she treads upon any thing in the street that is in the form of dirt, she stands and examines it, and, after looking at it for some time, heaves a sigh and goes on. Sometimes she stops so long that a crowd collects, a coach is called, and she is carried away. When any person enters the room, she rises and tries whether the door is fast, lest any wind should blow dust in upon her. On being asked whether she felt any pain in her head, she replied ‘yes,’ and put her fingers upon the organ of cautiousness.”—*Lond. Med. and Surg. Journ. June, 1829.*

## AMERICAN INTELLIGENCE.

*Mercury detected in Swaim's Panacea by Chemical Analysis.* By R. HARK, M. D. Professor of Chemistry in the University of Pennsylvania. (Communicated in a letter to Dr. HAYS.)—In February, 1827, I procured from the shop of Mr. Peter Lehman, druggist, sign of the Golden Lion, High street, a bottle of Swaim's Panacea, for the purpose of testing it for certain active metallic preparations which it was supposed to contain. Upon examination I found it to be clogged with so large a proportion of syrupy matter, that I considered it an object to get rid of this matter before prosecuting my examination. I therefore diluted about two-thirds of a bottle of the panacea with about two gallons of water, and added some yeast in order to induce fermentation.

Other subjects having absorbed my attention subsequently, the liquid remained covered up in the glass vessel into which I had introduced it, until nearly a year had elapsed. I then transferred the whole of the liquor, then much attenuated by fermentation, and the matter which had subsided from it, into a flat stoneware vessel, and placed it in my evaporating oven. From this situation this vessel was not removed, until the contents had been converted into a dry, blackish, porous crust. Of this crust the greater part was subsequently removed from the evaporating vessel, and being rolled up in paper was placed upon a shelf. Towards the close of the last summer, I happened to examine the crust attentively, when I observed on it some globules of metallic mercury. On further examination with the aid of a lens, I discovered it to be so replete with mercurial globules, that whenever any fresh portions of the crust were opened by means of a knife, more of them were observable. The crust was subsequently shown to Dr. Physick, Dr. Horner, and other intelligent friends, and it has been preserved in a bottle. I should have communicated these results to the public sooner, had I not been in hopes to have repeated the examination by another process; but not having as yet found it convenient to realize that intention, and as you deem it of importance that the facts which I have mentioned should be published, I send this statement to you for the American Journal.

[Our talented collaborator has conferred a valuable benefit upon the public by the evidence above afforded by him, that mercury enters into the composition of the nostrum sold under the name of "Swaim's Panacea," and added to his well-earned reputation by the ingenious method he has devised for detecting this metal. The only question now appears to be, in what state the mercury originally existed in the "Panacea." Its effects leave us in no doubt as to its being in the form of *corrosive sublimate*, the most active of the mercurial preparations, and one of the most violent of all poisons. In confirmation of this we may mention that when Swaim first commenced the manufacture of the "Panacea," he was in the habit of purchasing from Mr. Treichell, formerly an apothecary in this city, the corrosive sublimate in considerable quantities, made up in papers, each paper containing two grains of the sublimate. We state this fact upon the authority of Dr. Jackson, who had it from Mr. Treichell.]

*Congenital Hydrocephalus, forming a Cyst on the back of the Head, containing the Posterior Lobes of the Cerebrum: Water evacuated by Puncture of the Brain.* By W. E. HORNER, M. D. Adjunct Professor of Anatomy in the University of Pennsylvania.—Mrs. H., the wife of a shoemaker in this city, was delivered by Dr. Marsellis, July 29, 1829, at the full period of utero-gestation, of a female child. Nothing unusual had occurred during pregnancy, except that the mother



had a fall about a fortnight before her confinement. The child was about the size of an eight months one, and had, appended to the occipital region, a tumour larger than the head.

I saw it, for the first time, two or three days after its birth. The tumour was at that time twelve and a half inches in circumference, soft and fluctuating, of a spheroidal shape, and connected to the posterior fontanelle by a pedicle of an inch or more in diameter, which had a fibrous feel, and seemed to pass through the fontanelle from the interior of the cranium. The fontanelle was open about one inch, and was nearly square. There was just below this pedicle a small cyst, which contained half an ounce of fluid. The cranium was of little more than half the common size; the forehead very flat and receding; and the eyes and face projecting and large, as they commonly seem to be in ancephalous cases. The anterior fontanelle nearly closed. The occiput was also small, and very much flattened on its under surface. The pedicle of the tumour was covered by the common hairy scalp; over the remainder of the tumour the skin was bare, smooth, thinner at some places than at others, and where thinnest exhibiting the appearance of recent cicatrices. A soft fleshy mass, half the size of a common fist, was felt in the centre of the tumour, and this mass seemed to arise from the interior of the cranium. The tumour was somewhat excoriated at places, and had here and there thin scabs upon it; it was red and hotter than other parts of the child's body.

The child in its actions and general condition resembled other children of the same age; it sucked, cried, and threw its limbs about. Handling the tumour or squeezing it seemed to give pain. Its stomach and bowels were in good order.

Taking all the circumstances together, I immediately concluded this to be a case of congenital hydrocephalus, which had occurred in the lateral ventricles of the brain before the ossification of the cranium had much advanced, beginning perhaps about the fourth or fifth month of uterine life; and that the posterior parts of the hemispheres had been protruded backwards, and by the progress of the disease, and the natural growth of the head together, had been converted into cysts containing serum. That the character in short of the disease corresponded with spina bifida. I therefore determined to treat it by evacuating the water.

Accordingly I introduced for some days in succession several acupuncture needles, and drew off at a time through the holes very gradually, two or more ounces of a thin straw-coloured serum, which, for the time, produced a diminution of the tumour, but it would again become plump in the twenty-four hours. The fluid at last became too thick to flow through such orifices, and I then resorted to my lancet, which was plunged in obliquely for half an inch on each side of the tumour, as there appeared to be two cysts. By such means I evacuated these cysts daily; on one occasion, after an intermission of forty-eight hours, I drew off nearly half a pint of serum.

While this process was occurring daily, the tumour was kept moistened with brandy and water as a refrigerant mixture; an inflammation in the meantime was evidently existing in it, being exhibited by the red vascular injection of its integuments, by its heat, and by its tenderness on pressure.

On the 10th of July the infant had a convulsion of some minutes, the next day it had another, and also for succeeding days; on the 14th it ceased to suck; that day and the next it had many convulsions, and became pale, with frothing at the mouth. It died on the 15th, at 5 o'clock, P. M. having lived seventeen days.

*July 16th, 1829, Autopsy sixteen hours after death.*—Weather warm. On exposing this tumour it turned out to be what I had supposed, a congenital hydrocephalus, which had forced the posterior lobes of the cerebrum out through the posterior fontanelle. The dura mater of the tumour was identified with its integuments; its pia mater was highly inflamed, injected, and adhered universally to the integument. Each posterior lobe was distended into a spherical sac containing purulent serum, and having its inner surface in a softened disor-

ganized state. The connexion of the sac of the left side, with the corresponding lateral ventricle, was traced by a probe and finger passed from one into the other. But on the right side the sac was insulated, the lateral ventricle of that side being closed by a universal adhesion of its contiguous surfaces.

The anterior and middle lobes of the cerebrum and the cerebellum were in situ, and were not inflamed; they were of the usual consistence of infants of that age; and they were connected to the dilated posterior lobes by a narrow isthmus passing through the posterior fontanelle. Pons and medulla oblongata healthy.

No other part than the head examined.

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*A Case of Prolapsus Uteri.* By SAMUEL B. TOBY, M. D. of Providence, R. I. (Communicated in a letter to WILLIAM M. FAHNESTOCK, M. D.)—The following case of *prolapsus uteri*, as it differs in some of its symptoms from what is ordinarily observed, may not be deemed unworthy of record.

Mary —, (a coloured woman,) aged thirty-five years, applied to me for relief in October, 1828. She described herself as labouring under a spasmodic cough, which uniformly increased upon lying down, so as to harass her very much through the night; had a constant *pain in the left side*, and numbness of the thighs, occasionally, when standing at her work. She had leucorrhœa *slightly*, and at her monthly periods instead of a discharge of the catamenia, she *vomited blood* in small quantities, repeatedly, for three or four days, to the amount of about six ounces. During this period she was unable to pass her water, except by the aid of the catheter. These were her greatest difficulties, but she also complained of many nervous and hysterical feelings, that rendered her life a very uncomfortable one. On inquiry, I found that she had borne three children, and had been a widow two years. She did not know that there was any peculiar difficulty in her labours. She said she had been in this state of health about a year; had been subjected to a great variety of medical treatment from different practitioners to whom she applied in the country where she had lived, without deriving any benefit, on the contrary she was much depressed in spirits, and thought herself gradually growing worse. Among other medicines, she said she had taken emetics, every other day, for several weeks, and from all I could gather from her account, she had been pretty faithfully dosed with the whole catalogue of antispasmodics. From several of her symptoms, particularly the *fixed pain in her side*, I immediately suspected a prolapsus of the uterus as the cause of some of her difficulties at least, well remembering the minute instruction given by Professor Dewees on the diagnostics of this complaint. I told her of my suspicions, and inquired if this had never been suggested to her; she replied in the negative, and submitted to an examination per vaginam. I found the case as I anticipated, the uterus being situated within an inch and a half of the os externum.

I prescribed some slight pectoral medicine for her cough and directed the use of astringent injections for two weeks; at the expiration of which time, I introduced into the vagina a circular gum elastic pessary. She experienced *instantly* very great relief from the pain in her side, and in a few days it was entirely removed. Her cough and other difficulties rapidly diminished. At her next catamenial period she had no difficulty in passing her urine, and no vomiting of blood, but on the contrary a scanty menstrual discharge. In one month from this time she was quite well; her catamenia natural. She now left our town and I am informed she continues to enjoy good health, and has recently been married.

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*On Muriate of Lime in Paralysis of the Lower Extremities.* By ALEXANDER SOMERVAIL, M. D. of Essex County, Virginia.—In the Philadelphia Journal of the Medical Sciences, for 1823, I related some cases to show the good effects of muriate of lime in palsy of the lower extremities from diseased vertebræ.

In the beginning of January, 1829, a young negro woman was much afflicted

in various ways; confined to bed, and, when obliged to get up, her knees gave way, so that she could not stand without help. On examining the spine nothing was perceived amiss; and her other complaints were so distressing as to command all my attention. About the 10th of February some relief was obtained, and she continued to recover from that time.

I considered these complaints as only concurring with the disease of the spine, and therefore not detailed.

*March 6th.*—Her former complaints are removed: she complains now of pain in the back, (which has existed from the beginning,) of pain in the left side, half way between the ileum and the ribs, and inability to stand; she can move her limbs in bed, and has no sensation of numbness; has no appetite, and much emaciated. On examination, the three lower dorsal vertebræ protrude, and are painful on pressure; the middle one most so, and that most prominent; this too is the place where the pain of the back, so long complained of, is situated.

A large blister was immediately applied; a little relief of the pain of the part followed. On the 9th she began the muriate of lime, of which twenty drops in water was taken every two hours, (eight times every day.)

This is prepared by saturating the muriatic acid with lime. She was obliged to lie in bed, and was directed to continue there.

*17th.*—No pain in the back while lying; side also easier.

*24th.*—Better; appetite increasing.

*31st.*—Free of pain; cannot stand.

*April 9th.*—Doing well.

*16th.*—Still better.

*May 1st.*—Left off her medicine: appetite good; no pain; regains flesh and strength; can walk a little, but feebly.

*June 1st.*—Has taken no medicine for a month; has recovered flesh so much, that the prominence of the vertebræ is not seen, but can be felt; no pain there on pressure; and she can now walk well, though not so freely as before.

Another case at a distance occurred on the 5th of March: this was a large negro man, upwards of thirty, who had been lingering since July, 1828, also complicated with other complaints. He walks with a stick badly; his legs benumbed; his knees give way, so that he was often in danger of falling while walking. One of the lower dorsal vertebræ painful on pressure, a little enlarged and prominent. He took the muriate of lime with other medicines, (emetics and cathartics,) thought necessary for his other complaints, which were soon removed; and by the 5th of April he was so much better, that it was thought the medicine left would be sufficient for his recovery. I have not heard from him since, nor seen him since the 5th of March.

*A Case of Glossitis, attended with alarming symptoms of Suffocation, successfully removed by deep incisions made into the substance of the Tongue.* Communicated by A. HORROX, M. D. of Clinton, North Carolina.—George Taylor, aged about fifty-two, of athletic habit, and very corpulent, is the subject of this case. After wading the river in a cold day in February, he was suddenly attacked with symptoms of glossitis, with pain and soreness in the throat, and impeded deglutition. The tongue, soon after, began to swell, and in a few hours become so enormously enlarged as to completely block up the fauces, and protrude at the mouth, which rendered his respiration extremely difficult and laborious, and deglutition painful, and nearly impracticable, together with a distressful sense of approaching suffocation.

I saw him a day or two subsequent to the attack, and found him precisely in the situation as above described. Venesection, both general and local, was immediately resorted to, not merely for the reduction of inflammatory excitement, but for the purpose also of relieving the more urgent symptoms, as well as local turgescence. This praxis was promptly followed by an active emetic, but the latter afforded little or no benefit, as it could not be swallowed in sufficient quantity to produce the desired effect. Blisters, scarifications, stimulat-



ing rubefacients, fomentations, and a farrago of other useless applications were employed, but the whole proved altogether abortive.

Hence the only alternative left me for a choice in this desperate case, was the operation of tracheotomy. This was proposed to the patient, but he strenuously opposed it; and although he had lost the power of speech, yet he gave me to understand by his peculiar gestures, that he would not calmly submit to such a hazardous project, as he conceived, of having his throat cut to preserve his life. What was now to be done? The most judicious therapia, so far as I was acquainted with, had been employed without producing the least benefit, and the case approaching rapidly to a fatal termination.

Under these embarrassing circumstances I was prompted to try the result of the following expedient, an expedient which might possibly be attended with success; should it fail, however, tracheotomy might then be resorted to with a prospect of relief. The expedient alluded to is this, I plunged a sharp-pointed scalpel deeply into the substance of the tongue, on each side of it, near its root, and cut it out laterally towards the tip, thus making two deep lateral incisions. I preferred making the incisions in the side rather than under the tongue, lest the sublingual arteries, or some of their important ramifications might be divided, and thereby produce an unnecessary hæmorrhage. The operation succeeded beyond my most sanguine expectations, for in less than an hour the patient was relieved from nearly all his distressful sufferings. There was a very copious discharge of dark grumous blood, followed by blood of a natural colour and quality. Nothing more in the therapeutic way was done for the patient; he was perfectly restored to health in a few days.

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*The Operation of Laryngotomy and Tracheotomy performed at the same time, and on the same subject for the removal of an extraneous body from the larynx.* By ABNER HOFSTON, M. D.—James Mac Intosh, a very sprightly and intelligent lad, aged perhaps about eight years, while engaged in planting corn, accidentally inhaled a grain of it into his trachea, and which instantly produced the most alarming symptoms of approaching suffocation. The extraneous body had become so firmly located within some part of the vocal avenue, that to remove it by any expedient, unless by an operation, was found by the failure of repeated trials, to be absolutely impracticable.

Laryngotomy was therefore promptly resorted to, as the only probable means of preserving the life of this unhappy little sufferer. I commenced the operation by making an incision in the integuments between the thyroid and cricoid cartilages, and then transfixed the crico-thyroid membrane with a sharp-pointed bistoury; so far the operation was exceedingly simple, and very readily accomplished; but unfortunately, I found that after several, though ineffectual attempts to remove the foreign body, that the aperture was entirely too small to afford it a passage, neither would it admit of the introduction of the necessary instruments whereby this object might be attained. Hence rather than enlarge the aperture, by cutting through the cricoid cartilage, and the isthmus of the thyroid gland, and thereby endanger a wound of the superior thyroid artery, and a consequent troublesome hæmorrhage, I preferred as a better expedient, and one by which all these difficulties might be avoided, to enlarge the incisions in the integuments, and open the trachea half an inch at least below the isthmus of the gland. This part of the operation was as simple as the first, and as easily executed; and I am happy to add that I succeeded without further embarrassment in removing the obstruction, and the speedy restoration of my patient to perfect health.

*Remarks.*—I am, from the preceding observations, convinced that it is not by any means an easy matter, and indeed not at all times practicable, to remove extraneous bodies from an aperture in the crico-thyroid membrane, owing to the minute perforation which the operator is necessarily compelled to make, unless he chooses to enlarge the opening by dividing the isthmus of the thyroid gland, and thereby encounter a troublesome and often dangerous hæmorrhage; an operation at all times hazardous, and not often effectual. On the contrary,

the operation on the trachea is attended with little danger, and is often successful. Hence, if this view of the subject be correct, and I presume it is, laryngotomy will answer probably, and indeed should be performed, in every instance where the intention is merely to inflate the lungs, as in case of suspended animation from drowning, &c.; but that tracheotomy should be preferred where the design is to remove foreign bodies from the trachea.

*Of the Precipitation of Morphia from Laudanum by Ammonia; also of a Spontaneous Deposition of Narcotin.* By R. HARE, M. D. Professor of Chemistry in the University of Pennsylvania.—I believe it is not generally known, that the addition of ammoniated alcohol to common laudanum will cause a crystalline precipitate of morphia in the course of a few hours. If the precipitate thus obtained be dissolved in acetic acid, again precipitated by ammonia, and afterwards collected and dried upon a filter, the morphia will be obtained nearly white, and may be rendered perfectly so by repeating the solution by acetic acid, and precipitation by ammonia. I have by these means obtained thirty grains of morphia from an ounce of opium.

Instead of alcohol impregnated with ammoniacal gas, a mixture in equal parts of strong aqua ammonia and common alcohol will answer.

Narcotin is I find sometimes spontaneously precipitated in a crystalline form from a solution of opium in proof spirit. The circumstances under which I procured it are nearly these. A quarter of a pound of opium was boiled in a quart of proof spirit, and strained while warm through a coarse cotton cloth. The solution thus obtained being allowed to stand for about twenty-four hours, crystals were observed to be spontaneously deposited on the sides of the containing glass jar. These being dissolved in acetic acid, on the addition of ammonia a precipitate took place, which was collected by a filter and dried. Narcotin was thus obtained in the form of beautiful white, silky crystals, which were readily soluble in sulphuric ether.

When we consider how often opium has been dissolved in proof spirit, by chemists and pharmacopists, it is surprising that crystalline principles, so easily evolved as are morphia and narcotin by the process above described, should have escaped observation till lately, when Sertuerner, by a much less obvious route, had the honour of discovering them.

*Dissection of a Case of Peritoneal Dropsy.* Communicated by JOHN D. GODMAN, M. D.—A medical friend, who in practical knowledge is surpassed by few, but whose repugnance to appear as an author is insurmountable, placed the following notes of a dissection in my hands. The case is of considerable interest, and by no means very common; the correctness of the observations may be implicitly relied on.\*

*Examination of Mrs. H. aged forty-five, twenty-four hours after death.*—On cutting through the abdominal muscles, we came to a large sac, which had contained thirty pints of water, extending from the ensiform cartilage to the crista of the ilii, and adhering anteriorly to the inferior edge of the symphysis pubis, bounded anteriorly by the abdominal muscles, posteriorly by the peritoneum; of the consistence of cartilage, and of about two lines in thickness.

In the cavity of the sac were found two medullary sarcomatous tumours: the one in the left hypochondriac region flat, about an inch thick, and three inches in its long diameter: the other, situated exactly on the symphysis of the pubes, was round and three inches in diameter.

By cutting through the posterior boundary of the sac, we arrived at the intestines, which were studded with innumerable small tumours, from the size of

\* The same gentleman informed me that he recently examined the body of a boy of ten or twelve years of age, who had been knocked down and run over by a stage wheel. The boy lived an hour after receiving the injury, and appeared to die from internal hemorrhage. On opening the body, the destructive injury appeared to be a fracture of the liver through its thickest part. The spine had received no especial hurt.

millet seed, to that of peas, of the same nature as those existing in the sac, but rather firmer.

The kidneys were very large and appeared much diseased.

The subject of the preceding examination, came under medical care in May, 1828, she was then labouring under the usual symptoms of ascites; abdomen very much distended. In June she was tapped, and twenty-seven pints of water removed. She was afterwards tapped seven times, the last three times the sac contained thirty pints of albuminous serum; in fact, it was always much more so than we generally perceive it.

There was one circumstance which the examination explained, which was, that, although in the latter tapplings the cicatrix would open, and water be discharged for six or eight days, yet there never appeared any tendency to peritoneal inflammation.

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*Extirpation of Cancer of the Uterus*, by J. P. WARREN, M. D. Professor of Anatomy and Surgery, Harvard University.—“May 5th, 1829. Mrs. L. S., of S. æt. 38, somewhat more than eight months since, began to notice uncommon feelings in some of the pelvic organs,—pains extending from the uterus, as she supposed, to the right hip and down the right thigh. Not long after this she had more discharge than usual from the vagina, which, from her description, must have been purely transparent mucus. In about four weeks the discharge began to change in its character, appearing somewhat bloody; its quantity increased in the mean time, and pains were sometimes severe in the small of the back and in the right groin and thigh. She felt herself failing in strength and activity.

“On examination at the hospital, the whole neck of the uterus was found thickened and tender; the *fungus* was connected to the right side of the neck of the uterus and to the vagina for some distance; considerable hæmorrhage was caused by examination. She has had ten children,—the last now three years old, and nothing unusual occurred at its birth,—and has borne them with a great degree of ease. General health has ever been unusually good till the last eight or ten months. She is now pale, lips rather exsanguineous, eyes sunken, and the whole countenance expressive of great anxiety. Appetite various and capricious; pulse small and feeble.

12th.—Consulting surgeons assembled to-day, and after making a careful examination, advised to an operation, as being the only *alternative* that promised the slightest prospect of saving life.

“13th.—The patient, after being fully apprized of the *danger* and *uncertainty* of an operation, was left to consult her own feelings, and submit or not as she chose.

“14th.—Patient chose to undergo the operation, which was performed to-day at 11, A. M. by Dr. Warren, in the following manner:—The patient was placed upon the edge of the operating table, having her head and shoulders considerably elevated, and supported by pillows: her legs were flexed, knees separated as far as they could be without producing too much uneasiness, and firmly supported. All things being now ready, the operator proceeded to dilate the external organs, as the *first step* in the operation: this being fairly accomplished, he then introduced into the vagina the two first fingers of the left hand, which were to serve in directing a *pointed hook* which was introduced with the right, and with which was now transfixed the neck of the uterus. Having proceeded thus far in the operation, a gradual force was applied for the purpose of dragging the uterus downward into view. The uterus being drawn down as far as seemed practicable, the operator retained it in this position, and with a common scalpel in the right hand, made a circular incision round the neck of the organ, removing with it about half the body and a portion of the diseased vagina. Just as he was making the last incision to complete this part of the operation, there was a tremendous gush of arterial blood, but the hæmorrhage soon moderated. The whole hand being now introduced, some portions of the dis-



ceased part were found remaining; these were removed with a hook and pair of tonsil scissors. No opening could be found through the peritoneum or bladder; the latter organ sunk into the vagina so as to be distinctly seen. The operation now completed, a sponge was placed in the vagina, and the patient removed to her ward.

"After she was here, she continued almost in a state of syncope for two or three hours, after which there was considerable reaction. Pulse 100, and sufficiently full: had some colour in the face. At 10, P. M. pulse nearly as before; rather thirsty; did not complain of great weakness; said she had a frequent desire to void urine, and believed she had passed some, two or three times since the operation. An examination was made, and the sponge protruding from the external organs was saturated with urine. A catheter was passed into the bladder, but the organ was empty. Ordered gruel and diluent drinks; if faint and low, stimulants and cordials."

17th.—The patient gradually sunk, and died this morning at 8 P. M.

"18th.—*Post mortem Examination*, by Dr. Warren, twenty-four hours after death, in company with Dr. Channing and the house physicians, Parker and Gould, &c. The abdomen was opened. The serous coat at the upper part of this cavity was very slightly inflamed; toward the pelvis the inflammation was severe. No effusion of lymph was discovered, nor any step toward adhesion in any of the parts. Peritoneum, in the neighbourhood of the uterus and covering the bladder, considerably inflamed, but not sufficiently to produce death. All the uterus, except the fundus, was removed: this was perfectly free from the disease, no portion of which could be found remaining.

"This is the first operation for removing cancer of the uterus which has been practised here; and, though not successful in its termination, it warrants the belief that this very dangerous and terrible operation may succeed. This patient did not die of inflammation, nor gangrene, or lesion of the peritoneum, but probably from the effects of the bleeding; yet she survived this for three days, and had she not been greatly exhausted before the operation by the pain of her disease, and the debilitating discharges accompanying it, she would undoubtedly have recovered. The operation should be done at as early a period of the disease as possible."—*Boston Med. and Surg. Journ.* June 23d, 1829.

*Operation for Artificial Urethra.*—Two cases in which the operations for artificial urethra were successfully performed by Dr. WARREN, at the Massachusetts General Hospital, are related in the *Boston Medical and Surgical Journal*, of July last.

*Case of Paralysis from Fracture, in which a part of the Spinous Processes of two Vertebrae, half of the third, and the whole of the fourth were removed by an operation, with partial success.* By ALBAN G. SMITH, M. D. of Danville, Kentucky.—Some of the particulars of this case are related in the *North American Medical and Surgical Journal*. When a full account is published, we shall notice the most interesting circumstances.

*Anatomico-Surgical Drawings and Descriptions of all Surgical Operations, according to the most approved methods.* By L. J. VON BIERKOWSKY.—This valuable work, of which a favourable notice will be found in our first volume, we are happy to announce is about to be republished by Messrs. Carvills of New York. The text, which forms two volumes octavo, will be translated by a gentleman of talents, who promises to make many valuable additions to the original. The plates, consisting of fifty-eight, of large folio size, contain five hundred and seventy drawings, exhibiting the parts interested in operations, in their natural position and size, and representing the stages of each operation, also delineations of many morbid affections. A new edition of this book is now in the press in Berlin, and the American publishers having made arrangements to receive a sufficient number of copies of the plates, they will be enabled to

furnish the work at a price which will put it within the reach of almost every surgeon. Subscription price until the 1st of November next, \$30.

*Addresses by J. D. Godman, M. D.*—Our ingenious and talented colleague, Dr. Godman, whose ill health has compelled him to retire from the active duties of his profession, has employed part of his leisure moments in preparing for the press some of the addresses delivered by him to classes in the different institutions with which he has been connected. These addresses form a neat octavo volume, and may be procured of Messrs. Carey, Lea & Carey, or of any of the agents of this Journal.

*A Treatise on Pathological Anatomy, by W. E. Horner, M. D. Adjunct Professor of Anatomy,* will be published in a few weeks, by Messrs. Carey, Lea & Carey.

*Edwards's and Vavasseur's Materia Medica and Pharmacy; translated by J. Togno, M. D. & E. Durand.*—In the press, and speedily will be published by Carey, Lea, & Carey, *Materia Medica and Pharmacy*, by H. M. Edwards, M. D. and P. Vavasseur, M. D. comprising a concise description of the articles used in medicine: their physical and chemical properties; the botanical characters of the medicinal plants; the formulæ for the principal official preparations of the American, Parisian, Dublin, Edinburgh, &c. pharmacopæias; with observations on the proper mode of combining and administering remedies. Translated from the French, with numerous additions and corrections, and adapted to the practice of medicine and the art of pharmacy in the United States. By Joseph Togno, M. D. member of the Philad. Med. Society, and E. Durand, member of the Philadelphia College of Pharmacy.

#### NECROLOGY.

Died in Boston, March 27th, 1829, JOHN GORHAM, M. D. aged forty-six, one of the principal physicians in that place. He was born in Boston in the year 1783, and graduated at Harvard University in 1801, at the early age of eighteen. He studied medicine with the late Dr. Warren, and, after visiting some of the principal schools and hospitals in Europe, entered upon the practice of his profession in his native place in 1806. In 1809 he was chosen professor of chemistry in the Medical School of the University at Cambridge, which office he retained till the year 1827, when the labours of an increasing practice obliged him to resign it. His last illness, a pleurisy, was short, and of great violence. He survived his attack only four days.

Dr. Gorham did not acquire business rapidly. His progress to professional eminence was slow, but sure; and not many physicians within our knowledge have ever been more entirely beloved and confided in by their patients. There was an original kindness of heart constantly manifested in his countenance and manner, which insensibly, but surely won upon the affections of those around him; so that most of those who employed him as a physician, also valued and loved him as a man and a friend. The same qualities, combined with a high and honourable professional feeling, peculiarly endeared him to those associated with him in the same pursuits. Probably few physicians have ever been in practice for twenty-four years who have encountered so few of the unpleasant circumstances which arise out of professional competition and jealousy. All wished him well, for he wished well to all others.

In the acquisition of business, Dr. Gorham owed little to patronage, or to any other extrinsic circumstances. The reputation and practice which he obtained, he fairly earned by faithful and unremitting attention. He began among the poor, and worked his way into the highest circles of society. But to the end of his life, prompted by his natural benevolence of disposition, he visited a

great number of patients gratuitously. He had gone through a larger amount of professional labour than most practitioners, and was ready to undergo fatigue and exposure at any time, and to any extent. Probably this disregard of his own health and convenience may have contributed to his premature death; for, although his last sickness was sudden and violent, his health had obviously been less excellent than usual for several preceding months.

His death was felt as a public misfortune by all classes of society, as was evinced by the concourse which attended to pay the last tribute of respect to his remains. At the request of the Boston Medical Association, the funeral services took place in the church in which he had usually worshipped, and an address, commemorative of his life and character, was delivered by his friend and former colleague, Dr. Jackson.

J. W.

Died at New York, April 24th, 1829, Frederick Gore King, M. D. in the 28th year of his age. In addition to this simple enunciation of the death of a much lamented friend, there only remains the melancholy task of recording on the pages of the Journal, a feeble memorial of the professional attainments, private worth, and endearing qualities of him who has been thus prematurely removed from among us.

Dr. King, the youngest son of the late Rufus King, was born in England, in the year 1801, during the period in which his father was minister to that country. He came with his father's family to the United States when very young, and immediately commenced his education, pursuing his studies with zeal and ability, and evincing the possession of no ordinary talents. He entered Cambridge College, Massachusetts, with great credit, and at the completion of his academic course, left it with increased reputation. He now returned to New York, and commenced the study of medicine under the direction of the late Dr. Post; he early evinced a partiality for the study of anatomy, and he pursued it with corresponding zeal and success. At his graduation he defended an inaugural thesis on Neurology, a part of which was published in the second number of the third volume of the New York Medical and Physical Journal; this essay, which in its historical sketch exhibits great research and familiarity with the ancient writers in medicine, was but a precursor of a greater work on the same subject, which it was his intention to have published, and from which much valuable information might have justly been anticipated. After the attainment of his medical doctorate, he married the daughter of his preceptor, a mutual attachment having subsisted during the period of his studies. A brilliant career now opened upon him, and he entered upon it with a zeal and enthusiasm that held forth a certainty of the highest professional distinction. He had hardly commenced, before he was called upon, in the double capacity of brother and physician, to accompany his brother's wife to the Havanna. After a short absence he returned to New York, from whence he was again summoned, to proceed as speedily as possible to England, to accompany home his venerable father, whose enfeebled constitution had sunk under the accumulated privations and difficulties of a mission to England. On his return he prepared again to engage in professional occupations, when he was required a third time to cross the Atlantic, as professional adviser to his wife's sister, whose health required a winter's residence in Italy. The melancholy termination of this visit to the lady, whose death took place soon after her arrival in Italy, left him at liberty to prosecute his travels in Europe. He visited different parts of Italy, examining every thing worthy of observation in the arts and sciences generally, as well as enriching his mind with stores of professional knowledge. He visited France, and during his stay at Paris, enjoyed the greatest opportunities of improving himself in his favourite study of anatomy. He here added to his library a valuable collection of French authors on the different departments of medical science. In the fall of 1828 he returned to New York and resumed the practice of medicine. During the severe epidemic fever which visited the neighbouring country during that season, he attended the family of his elder brother, then



residing at Jamaica, Long Island, and there contracted the disease, from the effects of which he seems never to have entirely recovered; it aggravated a pulmonary attack, which he suffered when in Italy. During the succeeding winter he was obliged to confine himself to the house the greater portion of the time, harassed by severe cough; this continued without much intermission, until the month of March, when he was attacked with hæmoptoe. His friends, which included a numerous and extensive circle, now became seriously anxious about him: every exertion that domestic or fraternal solicitude, or the highest professional aid could suggest, was faithfully tried, to arrest the ravages of his fatal malady; they proved of no avail, but to afford a melancholy consolation to his afflicted family, of having rendered him all the assistance that human means could afford. For a short time after the cessation of the hæmorrhage, strong hopes were entertained that his naturally vigorous constitution would triumph over the disease; these hopes were of short duration, no material improvement resulted, and the disease proceeded with steady and rapid progress to a fatal termination. During his illness, eager inquiries were constantly made, and an anxiety pervaded the community to obtain intelligence of the state of his health.

Dr. King was early distinguished for quickness of apprehension, and for the great facility with which he acquired and retained every subject to which he devoted his attention. As a public teacher he gave promise of the highest excellence, his voice was clear and full, his manner grave and impressive, and his enunciation slow and distinct; he was remarkable for the openness and frankness of his disposition, for the kindness and urbanity with which he received all who approached him; these qualities greatly endeared him to the whole class of medical pupils who came under his instruction, whilst demonstrator to his father-in-law, Dr. Post. In the discharge of this office he was always willing and anxious to afford them every facility in his power in the prosecution of their studies.

In all the domestic relations, he was without reproach. A love of science generally, but particularly an ardent desire to improve that to which he had devoted his time and attention, distinguished his short professional career: his mind was matured and ripe for all the honours of his profession, which his premature death alone prevented his attaining. His countenance was noble and striking, his eyes full and intelligent, and few faces were more strongly marked with traces of genius and talent; it was the index of a heart where resided every kind and generous feeling.

His sympathy with the sufferings of his patient, and his anxiety to relieve them, the mildness of his manners, and the kindness and benevolence of his disposition will be long remembered by those who came under his professional care. Though so early removed, he has not lived in vain, his example yet remains to stimulate our medical youth who are pressing forward in the narrow path of high and honourable distinction.

Dr. King was among the first selected by the Athenæum to give popular lectures; this duty he discharged the first year by delivering four lectures on phrenology; the succeeding year, being again appointed, he lectured on the structure of the human voice, in which he gave a highly interesting view of the science of music. The National Academy of Design, with the laudable view of affording instruction to young artists, selected Dr. King to give a course of lectures on anatomy: the members of that association affectionately remember the interest he took in their welfare, and the pupils the valuable instruction he imparted to them. After his graduation, he spent one year in the New York Hospital, as house surgeon, and was immediately after appointed demonstrator of anatomy to the College of Physicians and Surgeons, Dr. Post being at that time professor of that branch; during this period he gave a very instructive course of lectures on the preparations contained in the museum.

J. M. P.

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